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Photos:
Darren Martin,
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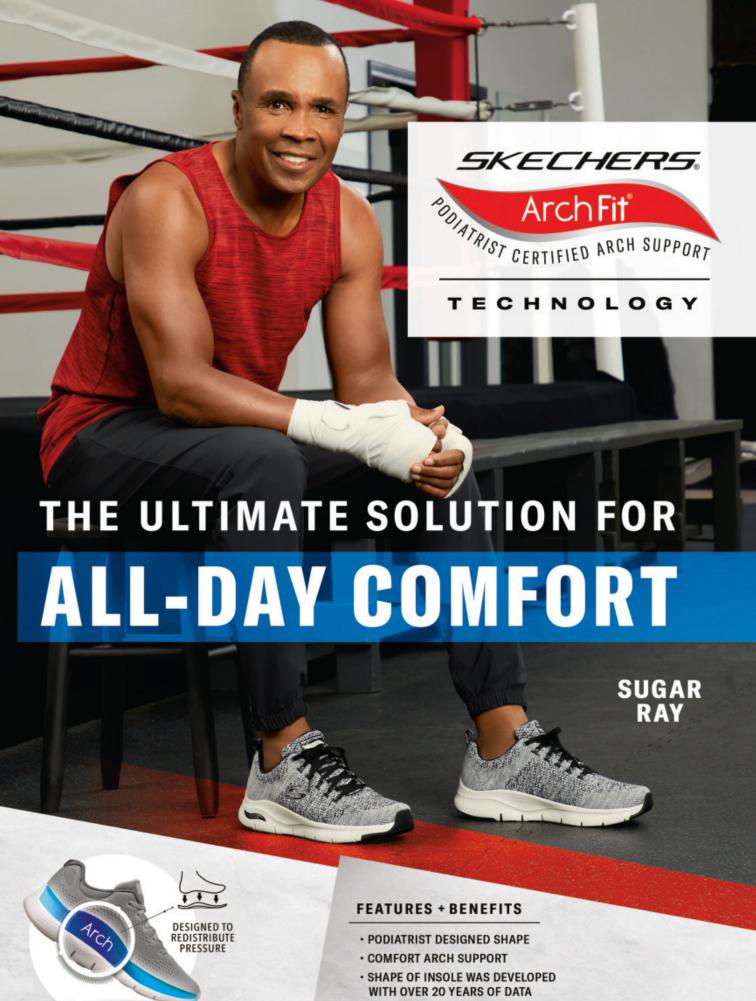








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Jonny Lieberman **Every Day I Am Driving**

When retro goes wrong: Making a worthy Lamborghini Countach sequel is hard.

There's no room

for logic when

it comes to the

Countach.



he unveiling of the new Lamborghini Countach LPI 800-4 was the most controversial thing to happen during this year's Monterey Car Week. Well, there was the rumor that Thurston Pillsbury III voted for Jack Kennedy, but we don't talk about that. No, it was the new Countach—all 112 examples at about \$3 million a pop—that had people talking, mostly not in a good way.

At face value, the 2022 Countach LPI 800-4 is a rebodied Sián FKP 37 (itself a rebodied and hybridized Aventador), an 803-hp 50th anniversary homage to the world's most definitive supercar. Lambo is building 112 of them, because the internal code name for the original concept Countach project was LP112. Logical, no? So what's the controversy?

There's no room for logic when it comes to the Lamborghini Countach. Simply put, the new car just isn't absolutely bonkers.

"Countach" means something akin to astonishment, only dirtier.

Nearly every other Lamborghini is named after a bull or a guy that killed a bull. Not here. I'm going to say something a bit controversial: The original Countach, neither the LP500 concept nor the much-fetishized LP400 Periscopio, isn't even the Countach. The Countach didn't become the Countach until the LP400 S appeared

in 1978, seven years after Gandini's original Bertone design sat on the 1971 Lamborghini Geneva show stand. The LP400 S was the one with flared fenders, phone-dial wheels, fat Pirelli tires, and, most crucially, that amazing wing. Don't take my word for it; an incredible Series III (82 produced) Verde Metallizzato-colored 1981 LP400 S won the special Countach class at this year's Pebble Beach Concours d'Elegance. Talk about definitive.

This new Countach, sadly, ain't that. As much a pastiche as an homage, the LPI 800-4 draws from several Countach iterations,

though the big influence seems to be the ill-fated prototype, the LP500. The most glaring detail is the shark-gill vents that sit above the comically oversized faux-NACA ducts on the body sides. Not one production car ever had those gills-just the prototype, which was subsequently destroyed in crash testing. Seems like an odd feature to single out, no?

The effect is that from the B-pillar back, the design references another V-12 Lamborghini, the far more recent Murciélago with its popup intakes in the down position. There's a bit of Diablo mixed in there, too. If the intakes aft of the gills had been raised rectangles, then at least some of the rear half would have read Countach.

I could go on and on attacking those mega triangles that are clearly not NACA ducts. They take up the entire door and remove all the tension from the side profile. These giant negative spaces look like part of the door was hacked away, almost like a wound. Why are they so massive? Because the design team was constrained by the Aventador mechanicals. The mighty 6.5-liter V-12 requires gobs of fresh air. The rear of the triangle-which, of course, is the same size as every Aventador side scoop—is the proof.

Speaking of constraints, the taillights are lifted right off the Sián. This irks me for two reasons. One, the OG Countach has perhaps the most distinctive taillights, well, ever. And two, how many millions is Lambo charging for this new one? Change out the lights, man. I could keep picking nits like this, but that's not the central problem.

The LP500 prototype that Lamborghini head of design Mitja Borkert decided to emulate is not the Countach an entire generation of car-mad teenagers hung on their walls. It didn't even have a NACA duct. I had a short discussion with Borkert about the new Countach at Pebble Beach. I had posted a shorter version of these thoughts on Instagram, and when I walked into the Lamborghini house, Borkert raised his fists up at me. Playfully, I hope. He previously explained to me how he, unlike most Countach fans, grew up in East Germany. Not only did he not have one of those posters on his bedroom wall, but he also never so much as saw a Countach back then. I don't mean to pick on Borkert; he's a terrific designer

> responsible for the drop-dead gorgeous Porsche Mission E concept car. But he missed the mark here.

There's an undeniable irony that the man tasked with reimagining the literal poster child for Reagan-era excess grew up under communism. During the coked-out days of Gordon Gekko, the word "Countach" was essentially

a synonym for too much never being enough. There's a reason why in The Wolf of Wall Street, DiCaprio had that drug-fueled wrestling match with a Countach and not another car. Remember, countach, the expression itself, is what some people reflexively shouted in Sant'Agata Bolognese when they saw a beautiful woman. Were you to rip someone's blindfold off in front of the new Countach, there are many words they might utter, but "countach" isn't one of them. Now, the Aston Martin Valkyrie Spider? Holy countach!



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2023 Nissan Z

There are no numbers in its badge, but the new Z is turbocharged and offers a manual.

WORDS CONNER GOLDEN

ot damn—it's a new Nissan Z! More specifically, it's *the* Nissan Z. That's right, the seventh generation of the famous sports car is the first to snip off the model designation's numeric portion in favor of a simple "Z" badge.

As you probably know, since the first 240Z rolled into U.S. Datsun dealerships in 1969, the three digits in any Z car's moniker signified the displacement of its six-cylinder engine. This wouldn't have held, however, if the new car adopted the long-rumored 400Z name: The 2023 Z packs a 3.0-liter twin-turbo V-6, marking the return of turbocharging to the line for the first time since the 300ZX Twin Turbo left our shores 25 years ago.

Although the name is new, the V-6 is not, as it's the same VR30DDTT found in the Infiniti Q50 and Q60. That's actually a fairly common theme with the 2023 Z. Instead of an all-new, ground-up redesign on a new platform, Nissan slathered a veneer of modern-spec materials, powertrain pieces, and infotainment tech over the 11-year-old bones of the outgoing 370Z. This means there's also some 350Z DNA floating around in the new Z's tank, considering this platform stretches back to the Z's return to the U.S. market in 2002.



The new car doesn't lack for muscle, with 400 horsepower and 350 lb-ft of torque vaporizing the rear tires through your choice of a nine-speed automatic or—unlike the auto-only Toyota Supra—a six-speed manual complete with a tuner-tastic Exedy clutch. The six-speed is the same 'box from the 370Z, and the automatic is the more recent unit from the new Nissan Frontier but with its own high-performance programming. It should prove sharper and more efficient than the old seven-speed automatic.

Other drivetrain bits also carry over, with the differential, carbon-composite driveshaft, and axles coming from the 370Z. This is unsurprising, as the new Z is structurally unchanged from the prior car outside of rigidity improvements, particularly in the rear hatch area. The suspension mounting points, driveline areas, and even the 100.4-inch wheelbase are shared with the 370Z.

The same can be said of the control arm front and multilink rear suspension, though the dampers and spring rates have been retuned for the new car. If you're looking for something truly fresh in the chassis, the Z's steering is electrically assisted for the first time.

The biggest departure from the previous car comes via the sharp, sculpted exterior duds,



2023 Nissan Z		
2023 NISSUIT Z		
PRICE	\$37,500 (est)	
LAYOUT	Front-engine, RWD, 2-pass, 2-door hatchback	
ENGINE	3.0L/400-hp/350-lb-ft twin-turbo direct-injected DOHC 24-valve V-6	
TRANSMISSIONS	6-speed manual, 9-speed auto	
CURB WEIGHT	3,500 lb (est)	
WHEELBASE	100.4 in	
LXWXH	172.4 x 72.6 x 51.8 in	
0-60 MPH	4.0-4.4 sec (MT est)	
EPA FUEL ECON	Not yet rated	
ON SALE	Early 2022	

an aesthetic shift first previewed via the Nissan Z Proto concept from late last year. The production car is a handsome sports car, blending 240Z, 300ZX, and modern 350Z/370Z cues into one cohesive design.

All of the Proto's stylistic hits are here, including the neat katana blade motif/ trim running the length of the roof edges, as well as the rear panel that strongly recalls the 300ZX. We're happy to see the gawping front end left to the prototype; it was more maw than mouth. The egg-crate grille remains, but the upper portion is now painted a lighter shade of gunmetal than the Proto's black-on-black piece and gives the fascia some much needed depth.

The 370Z's interior was perhaps its most obviously ancient feature, and

we're pleased to report that, while the general layout is the same, the materials and amenities have been upgraded. A slick, 12.3-inch TFT display takes the place of the old analog gauges, offering a customizable layout with a set of themes to pick from. A standard 8.0-inch touchscreen sitting flush in the center of the dash handles infotainment duties, with a 9.0-inch screen available.

Two USB ports charge your mobile devices, and two (up from one) cupholders coddle your hydrating fluids. Depending on how much you wish to spend, there are some reasonably ritzy options to be had, including leather upholstery, an eight-speaker Bose sound system, and active noise canceling. The new Z's cabin seems as if it will be a nice place to spend time while you rip up the nearest country road or maybe idle some time away in the drive-through line.

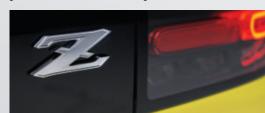
There are two trims at launch: Sport and Performance. Sport is the entry point, with standard fixins like manual cloth seats. Most buyers will spring for the Performance, which shotguns the new Z from nose to tailpipe with all sorts of performance and quality-of-life goodies, starting with a specific front chin spoiler and rear decklid lip. The Z Performance rides on the same suspension as the Sport but also offers a more performance-tuned setup, as well as 19-inch Rays wheels wrapped with sticky Bridgestone Potenzas and a set of beefier four-piston front brakes. Performances equipped with the nine-speed auto can annoy neighbors and enrage cops with the trim-exclusive launch control function. Prefer to shift that auto yourself? The Performance also tacks on aluminum shift paddles straight from the big bro GT-R.

If you're a true Z superfan—they remain legion—a special Proto Spec kicks things off. Based on the Performance, it struts its stuff with yellow brake calipers, bronzecolored wheels, an edition-specific shift knob, special seats with yellow accents, door trim upgraded with suede and cloth inserts, and extended yellow stitching. Nissan will build only 240 examples.

As of this writing, pricing is still unknown, but it's assuredly going to be more expensive than the relatively cheap 370Z, which started at just a tick more than \$30,000 for 2021. Look for a base price somewhere in the mid- to high-\$30,000 range. As for when the new Z will hit the streets, start keeping your eyes peeled once the calendar flips to 2022.







Intake

2022 Ford Maverick



Small truck, small

price, big mpg.

ith the midsize pickup segment fully revitalized, smaller trucks like the Maverick are splashing onto the scene, aimed at folks for whom a midsizer might still be too much vehicle.

Like the rival 2022 Hyundai Santa Cruz, the Maverick is built on a crossover platform. The base 2.5-liter I-4/electric motor combo drives the front wheels through a CVT. Related to the Escape Hybrid's powertrain (but with a new in-house-developed motor), it produces 191 total horsepower. Ford says the FWD-only Maverick Hybrid will offer 40/33/37 mpg city/highway/combined and can travel up to 500 miles on a single tank.

An optional 2.0-liter turbocharged EcoBoost I-4 as seen in the Bronco Sport spins up 250 hp and 277 lb-ft of torque, and it pairs with an eight-speed auto. Ford offers an off-road-oriented FX4 package on EcoBoost AWD Mavericks; it adds all-terrain tires, a revised rear suspension, a higher-capacity radiator



2022 Ford Maverick

BASE PRICE \$21,490

LAYOUT	Front-engine, FWD/AWD, 5-pass, 4-door truck
ENGINES	2.5L/162-hp/155-lb-ft Atkinson-cycle DOHC 16-valve I-4, plus 126-hp/173-lb-ft electric motors, 191 hp comb; 2.0L/250-hp*/277-lb-ft* turbo DOHC 16-valve I-4
TRANSMISSION	Cont variable auto, 8-speed auto
CURB WEIGHT	3,550-3,750 lb (mfr)
WHEELBASE	121.1 in
LXWXH	199.7 x 72.4 x 68.7 in
0-60 MPH	6.9-8.5 sec (MT est)
EPA FUEL ECON	40/33/37 mpg (est, Hybrid)
ON SALE	Fall 2021

*Measured using premium fuel, not required

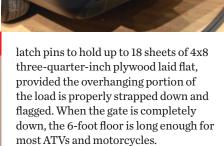
and upgraded cooling fan, skidplates, exposed front tow hooks, a hitch with a four-pin connector, off-road drive modes, and hill descent control.

All Mavericks can haul 1,500 pounds in the bed, but towing capacity varies depending on powertrain. Hybrids and EcoBoosts can lug 2,000 pounds, while Maverick EcoBoosts with the optional 4K Tow package can pull—you guessed it—up to 4,000 pounds, or the weight of an average 21-foot boat. The Santa Cruz can tow between 3,500 and 5,000 pounds.

The Maverick's 4.5-foot steel box is 6 inches longer than the Santa Cruz's

composite bed, and the tailgate has two open positions. Leave it half open by hooking the support cables to the





The Maverick's modular FlexBed cargo area supports both Ford-supplied and DIY accessories. Using eight standard tie-downs and cleats (two of which double as bottle openers), built-in threaded holes, 12 anchor points, and various slots stamped into the bed, Ford says owners can "create segmented storage, elevated floors, bike and kayak racks, and more." Available extras include a spray-in bedliner, bolt-in sliding tie-downs, a bed extender, and an array of soft and rigid folding tonneau covers.

There's room for five people inside, as well as hidden storage throughout. Most notable are the Ford Integrated Tether System slots on the back of the center console and underneath the foldable rear bench. They'll accommodate accessory cupholders, trash bins, bag hooks, and storage dividers, and Ford is releasing the slot geometry so people can 3-D-print their own FITS items.

The spacious cabin provides a commanding view of the road and features high-quality cloth or synthetic leather upholstery, plus mixed materials on the dash and doors, all designed for easy cleaning. The off-white dash finisher is pleasing to the touch and complemented by accent colors depending on trim level. The XLT, for instance, gets orange accents, while the higher-spec Lariat has a neat rose gold look. Apple CarPlay and Android Auto are standard.

The Maverick XL starts at an incredibly low \$21,490; the XLT begins at \$23,775, the Lariat at \$26,985, and the 2022-only First Edition at \$32,360. With pricing like that, plus its clever packaging, tidy size, and practicality, the Maverick is primed

for success. With any luck, we just might witness the renaissance of another truck segment.

Christian Seabaugh







Pre-production vehicle shown. Production model may vary.

Because what we create today creates tomorrow.

Movement that inspires

the future. Which is why Kia is building a new generation of electrified vehicles.



Look elsewhere for a Tesla competitor.

ou may wonder if Mercedes' new EQS electric luxury sedan is a Tesla wannabe with a three-pointed star on the nose. Nope. It's not.

See, Mercedes has existed in some form or another since 1883. Tesla was founded in 2003 and only started producing mainstream EVs about a decade ago. With that extra century under its belt, Mercedes' reputation precedes it-one that doesn't include gimmicks like horns that make fart noises or apologists ready to defend any missteps on Twitter.

It's old money versus new money, and the 2022 EQS puts this on stark display, masterfully leveraging its quiet, swift electric powertrain and technology to deliver a superior luxury experience to any Tesla.

At launch, two versions are available: the AWD EQS 580 and the rear-drive EQS 450+. Both have a 107.8-kWh battery pack, but the 580's dual motors combine for 516 hp and 631 lb-ft of torque vs. the 329

The Merc is mega-quiet and pours itself down the road in well-isolated splendor no other EV can match. Both EQSs ride on Mercedes-Benz's magic-carpet-like air suspension, with adaptive dampers that firm up just a smidge when you flick the drive mode selector to Sport.

The EQS is maniacal about minimizing driving effort. An example is its elegant solution to the sometimes odd switchover between electronic and mechanical braking: The pedal moves to match the level of regenerative braking while coasting. This ensures when you step on it, you needn't push through false travel to match the computer's braking. The result is ultra smooth and seamless no matter when you physically get involved.

Similarly, every EQS gets rear steering. At low speeds it turns the back wheels in the opposite direction as the fronts to deliver tight turns that require only a wrist snap of the steering wheel, making it feel

running the width of the dashboard-is far more approachable than you'd expect. The 12.3-inch driver display offers multiple layout styles, while the 17.7-inch central screen features tiles for favorites along the bottom. The front passenger can access almost every function on their own screen, including inputting a destination and swiping it to the central panel, which starts guidance for the driver.

Regardless of whether you think the exterior is worthy of similar praise, you need to see it in person. Lost in photos is its sheer scale, and you likely won't care about its looks once you're inside-that's how sumptuous and serene the cabin is.

Mercedes, of course, lacks a monopoly on leveraging electric motors' smooth, torque-rich, and utterly silent operation, and deeper analysis of charging and range capabilities will have to wait for a full test. But the EQS is the world's most luxurious EV sedan right now, meaning it's everything a Mercedes should be and most of what a Tesla isn't. Alexander Stoklosa

2022 Mercedes-EQ EQS-Class

516 hp and 631 lb-ft of torque vs. the 329	snap of the steering wheel, making it feel		00 14 140 0.400
hp and 419 lb-ft of the single-motor 450+.	as if you're behind the wheel of something	BASE PRICE	\$100,000 (est)
Mercedes says the former reaches 60 mph in 4.1 seconds and the latter in 5.9. Hardly	much smaller. At higher speeds, the rear wheels move in phase with the fronts for a	LAYOUT	Rear- or front/rear-motor, RWD/AWD, 5-pass, 4-door sedan
"Ludicrous," but that's hardly the point.	stabilizing effect.	MOTOR(S)	329-hp/419-lb-ft AC permanent-magnet motor; 187-hp/212-lb-ft front & 329-hp/419-lb-ft rear AC permanent-magnet motors, 516 hp/631 lb-ft comb
Par paralla de la companya del companya de la companya del companya de la company		TRANSMISSION	1-speed automatic
		CURB WEIGHT	5,600-5,900 lb (mfr)
	605 4504	WHEELBASE	126.4 in
		LXWXH	207.3 x 75.8 x 59.6 in
		0-60 MPH	4.1-5.9 sec (mfr est)
	S'E0507E	EPA FUEL ECON	Not yet rated
		ON SALE	Winter 2021
16 MOTORTREND.COM NOVEMBER 2021			





irza Grebovic's eyes light up when he talks about brake pad compounds. He's Cadillac's performance variant manager, and his passion clearly goes beyond the paycheck.

You see, this Blackwing is big and exceptionally powerful. Getting it stopped quickly, repeatably, and reliably on track is no small feat, yet it's one Grebovic obviously relished, as he told us about the roughly 20 compounds his team tested before settling on one that met noise and temperature targets while surviving almost 800 laps during a marathon, 24-hour track testing session.

The anecdote is important because it shows how hungry Cadillac was to get this Blackwing right. As the brand prepares to pivot fully toward EVs, this car is the last of its kind to feature a feral, screaming, torque-drunk 6.2-liter supercharged LT4 V-8, and Grebovic and his associates wanted to ensure the CT5-V Blackwing

epitomized everything enthusiasts love about the traditional automobile.

The car packs a staggering 668 hp and 659 lb-ft of torque routed through a slick six-speed Tremec manual. (A 10-speed automatic is optional.) It sounds positively pyrotechnic, too, with an aural profile designed to "scare small children," vehicle performance engineer Sim Gill said. The exceptional chassis, an evolution of the old CTS-V's, incorporates the most advanced MagneRide active suspension to date.

It all combines to deliver confidence-inducing poise and tenacious grip, though as Tony Roma, Cadillac's chief engineer for sedans, puts it, exploring its natural limits would likely be "intimidating to most, uh, humans." So making the Blackwing as approachable as possible was the primary mission of Roma's team, to develop a car that encourages the driver to push rather than scaring them into backing off. It's done so, splendidly.

The MagneRide suspension makes the CT5-V Blackwing as smooth as you'd expect a big Cadillac to be in Comfort mode, while altering chassis settings simply dials up the directness, giving you more information about what's happening underneath the car. There's just enough body motion to provide information about the car's attitude, but unpleasant heaving motions are mostly dialed out, especially in quick corner transitions.

That's good, because Virginia International Raceway, where we drove the car, is packed with such segments. It's a fast track with big curbs, but the CT5-V Blackwing's ability to absorb serious suspension punishment while remaining settled enough to lay down its power tsunami builds instant confidence that only increases as your aggression rises.

Plus, in absolute terms, the CT5-V Blackwing is a bargain. You can't even look at a BMW M5 or Mercedes-AMG E 63 S for less than \$100,000, and neither can touch the Caddy's power or torque. Yet the Blackwing starts at \$84,990 and costs \$102,580 with every performance option.

It's probably obvious by now the development team succeeded in its goals, creating a machine that so clearly channels its enthusiasm to the end user. The fully electric V's of the future, should they exist, would do well to leverage this car's dynamic learnings and haptic excellence. For now, the CT5-V Blackwing is so rewarding we'd have happily lapped until we ran out of fuel. That's some kind of success metric, right? Alex Kierstein

	2022 Cadillac CT5-V Blackwing		
and the same	BASE PRICE	\$84,990	
	LAYOUT	Front-engine, RWD, 5-pass, 4-door sedan	
	ENGINE	6.2L/668-hp/659-lb-ft super- charged OHV 16-valve V-8	
	TRANSMISSIONS	6-speed manual; 10-speed auto	
	CURB WEIGHT	4,150 (mfr)	
	WHEELBASE	116.0 in	
	LXWXH	194.9 x 74.1 x 56.5 in	
	0-60 MPH	3.4 sec (mfr est)	
	EPA FUEL ECON	13/21-22/15-16 mpg	
	ON SALE	Summer 2022	
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est days that include a new Porsche 911 GT3 don't come around often. Since 1999, when we tested the first 996-generation GT3 R race car, we've run numbers on 11 previous GT3s, including the even more track-focused RS models. We've now concluded our instrumented testing of the latest 992-series GT3, and if you wonder how its numbers measure up to its outstanding predecessors, hold on to your balaclava.

You might not feel the acceleration differences between the 500-hp, 339-lb-ft 991.2 GT3 and the 502-hp, 346-lb-ft 2022 model, but they are there in our test data.

One of the largest advancements seems to have come from Porsche's further development of its benchmark launch control system. It now revs to a range of 6,000 to 6,200 rpm while still masterfully working the PDK automatic's dual clutch plates. The result is a zero-wheelspin launch to 30 mph in 1.0 second, or 0.3 second quicker than the previous GT3. (The C8 Corvette Stingray Z51 is the only other rear-drive car we've launched this effectively; all others with a 1.0-second or quicker sprint to 30 mph had the advantage of AWD.) This initial holeshot lead over the old GT3 grows to 0.4 second by 60 mph-2.7 seconds against 3.1-a gap the new GT3 maintains for the rest of the quarter-mile run, finishing in 10.8 seconds versus 11.2.

It has to be said the 2022 Porsche 911 GT3's sub-11-second quarter mile with a 4.0-liter naturally aspirated six-cylinder engine is exceptional. The only other non-turbocharged cars to crack the remarkable 11-second threshold featured either two electric motors (Tesla Model S and Porsche Taycan), a V-10 (Lamborghini Huracán and Audi R8), or a V-12 (Lamborghini Aventador and Ferrari's 812 Superfast and Enzo). For extra perspective on the achievement, consider this: Those V-12s boasted respective displacements of 5.2, 6.0, and 6.5 liters. Hat tip to Porsche.

On our scales, the new GT3 is 34 pounds lighter than the last one. What's more, the new model's tires-Michelin Pilot Sport Cup 2R NOs measuring 255/35R20 in front and 315/30R21 at the rear-are wider and stickier. No surprise, then, when we verified the new GT3 stops shorter than the old one. With both cars equipped with optional carbon-ceramic brakes, the 2022 GT3 came to a rest from 60 mph in an astounding 93 feet, 6 fewer than its predecessor. At 1.15 g, there's also 0.08 g more lateral grip on the skidpad, and the new car produces a quicker figure-eight lap time of 22.3 seconds versus 22.7. Only the 2019 Porsche 911 GT3 RS boasts better stopping and handling credentials within the lineup, and there's no doubt a 992-series GT3 RS is on its way.

We've loved every GT3 Porsche has ever created. This homologation special is the center-locking hub of the widely varied Porsche 911 wheel, from which several spokes emanate to support the 911 Carrera, Cabriolet, Targa, GTS, and Turbo models. Even the weaponized, trackfocused GT2 RS owes something of a fist bump to the pure-joy GT3.

Indeed, the 2022 911 GT3 remains the purest expression of the entire model range, and of Porsche's philosophy overall. Its high-revving, naturally aspirated flat-six sits over the rear axle. It remains steadfastly rear drive, and the standard transmission is still a six-speed manual.

The GT3 is built to be responsive, inspire confidence, and connect its driver to the machine, and it's a pleasure to see how something so eminently capable and communicative becomes even more so with each new generation. Test numbers,

the seat of our pants, and the adrenaline coursing through our bodies after driving this car once again back up its pedigree and capabilities. Chris Walton





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FIRST DRIVE 2022 PORSCHE 911 GT3 TOURING And now for the one

without the huge wing.

tepping into the new GT3 Touring, you realize right away it isn't your typical car when you notice a fire extinguisher affixed to the front passenger-side floor. Hopefully it never gets used, but you never know, because this Porsche is straight fire.

It's not the match of the AWD 911 Turbo S in brutal, blunt-force acceleration, but that's not the point of the proudly rear-drive GT3. Rather, the GT3-and this Touring version in particular-is about balancing track strafing with dominating your favorite back road. And, yes, hearing its glorious 4.0-liter naturally aspirated flat-six scream all the way to 9,000 rpm.

The only thing the base GT3 has on the Touring is its massive, highly adjustable swanneck rear wing-otherwise, you're getting the same experience, simply with more luxurious cabin appointments. The difference in at-thelimit downforce will be missed only by the most dedicated track rats, anyway.

Thus this 911 performs as you'd expect on a challenging mountain road: with precision, mechanical grace, and heart-pounding, breathless pace. The Touring digs into every bend and never stops until you're practically to China. Its steering feel eclipses that of almost any car we've driven, other 911s included.

Our Touring, sprayed in a fabulous Gentian Blue Metallic that contrasted magnificently with its gold-painted wheels, had a six-speed manual. Porsche kept the six-speed here mainly for weight savings versus regular 911s' seven-speeder, but also because it says the





2022 Porsche 911 GT3

BASE PRICE	\$162,450
PRICE AS TESTED	\$197,670
VEHICLE LAYOUT	Rear-engine, RWD, 2-pass, 2-door coupe
ENGINE	4.0L/502-hp/346-lb-ft direct-injected DOHC 24-valve flat-6
TRANSMISSION	7-speed twin-clutch auto
CURB WEIGHT (F/R DIST)	3,213 lb (40/60%)
WHEELBASE	96.7 in
LXWXH	180.0 x 72.9 x 50.4 in
0-60 MPH	2.7 sec
QUARTER MILE	10.8 sec @ 127.9 mph
BRAKING, 60-0 MPH	93 ft
LATERAL ACCELERATION	1.15 g (avg)
MT FIGURE EIGHT	22.3 sec @ 0.95 g (avg)
EPA CITY/HWY/COMB Fuel Econ	15/20/17 (est) mpg
2022 Porsche 911 GT3 Touring	
BASE PRICE	\$162,450

	2-pass, 2-door coupe
ENGINE	4.0L/502-hp/346-lb-ft direct-injected DOHC 24-valve flat-6
TRANSMISSIONS	6-speed manual, 7-speed twin-clutch auto
CURB WEIGHT	3,150 lb (mfr)
WHEELBASE	96.7 in
LXWXH	180.0 x 72.9 x 50.4 in
0-60 MPH	2.7-3.0 sec (MT est)
EPA FUEL ECON	Not yet rated
ON SALE	Early 2022

LAYOUT

Rear-engine, RWD,



gearbox simply works better with this car. The automaker is correct. It's a delight to use, and working the wonderfully tactile lever simply never gets old. You can for the first time get Porsche's seven-speed PDK on the Touring, but with no cost difference, it's down to preference.

As in the regular GT3, the brakes scrub speed with authority. The more you get used to their effectiveness, the more they dare you to stomp on them later in braking zones. Finally, on the freeways and back roads, the GT3 Touring's ride, while firm, doesn't beat you up whether in Normal, Sport, or Track mode. This is a car you can easily live with in the daily bump and grind.

Inside, Touring customers have more options versus the standard car, including various trim combinations and a contoured dash pad. There are a couple of small exterior differences over the main GT3, as well, including the colorkeyed grille treatment and silver trim around

The new GT3 Touring costs \$162,450 to start, the same price as that other one with the wing. The fire extinguisher? It'll set you back an extra \$150. Michael Flovd

REAR VIEW

From the MT Archive...

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\$0.75 For a while in the '50s, '60s, and '70s, it seemed like turbineor jet-powered cars would be the next big thing. Although

Chrysler was most famous for these types of jet efforts, the cover car for our November 1971 issue was an AMC Hornet equipped with a turbine engine by Williams Research. Our drive of the jet car found it to be laggy but smooth.



\$2.95 The Top 10s that

today populate your Facebook feed filled our November 1991 issue. In it we included our top 10 dream cars (No. 1 was the Pontiac Protosport4 concept), our top 10 Corvettes (highlighting our favorite of each generation), top 10 notable automotive technologies (including new refrigeration chemicals and active suspensions), and our top 10 domestic and import new car buys.



\$4.99

This was a fun one, as our November 2011 issue featured our Best Driver's Car story including the Audi R8 GT, BMW 1M Coupe, Corvette Z06, Ferrari 458 Italia, Lexus LFA, Lotus Evora S, Mercedes-Benz SLS AMG, Mustang Boss 302 Laguna Seca, Nissan GT-R, Porsche 911 GT3 RS, and Porsche Cayman R. The Ferrari won the contest, but the GT-R stole the show in our inaugural World's Greatest Drag Race.



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Frank Markus

Technologue

Hello, dolly, goodbye, axle overloads! New way to shoulder big payloads.

connects to a

Class-III hitch

and serves

as an extra

loaded axle.

hortly after our long-term Ram 2500 Cummins test truck arrived, I did what manufacturers assume all truck owners will eventually do: I overloaded it. I needed two 3,880-pound pallets of cement to build a seawall. Each one, centered over the truck's rear axle, exceeded the gross axle weight rating by about 1,150 pounds and the gross vehicle weight rating by about 2,040 (roughly 20 percent in each case). The truck easily managed the short trips I made without incident, but I recently learned of a new device that could have brought it into legal compliance on those runs.

Canadian entrepreneur Lawrence Stross has devised a load-divider dolly "trailer" equipped with three air springs. It rigidly connects to a truck's Class-III hitch receiver, allowing the dolly to serve as an additional loaded axle with passive steering. Two air springs support the axle and shoulder some of the rear axle's burden. A third imparts a torque moment between the hitch receiver and the trailer to shift some payload burden to the front axle.

Load-distributing trailer hitches work similarly, but when driven over dips and driveway ramps, the torque on the vehicle can vary. Because an air compressor on the dolly maintains constant pressure in that third airbag, the load-divider dolly maintains more consistent loading of each axle in these conditions.

The design is rated for 1 ton (including the 340-pound dolly). This weight counts as trailer weight and hence applies to the gross combined weight, not the gross vehicle weight. The trailer draws 12-volt power and lighting signals from a standard seven-pin connector.

At 1 ton, trailer brakes are not required, and testing confirms braking distances are well within Canada's legal maximum. The Ford F-150 used for testing carried 1,938 pounds of ballast distributed to max out the truck's axle weight ratings. This mass exceeds the GVWR by 1,530 pounds but undercuts the gross combined weight rating

by a lot. Braking distances from 60 mph measured 189 feet—18 percent longer than the same truck unladen. Stross envisions adding higher-capacity dolly models with trailer brakes in the future. Optimal load distribution improves safety and control while reducing brake, tire, and suspension wear and avoids potentially costly vehicle overload fines.

Setting up the load-divider dolly requires adjusting the attachment point to match the unladen truck's receiver height and memorizing that setting in the ECU. Then the dolly can be detached for loading, reattached, and set to level the truck and distribute the load.

The dolly's solid axle trailing arm suspension geometry provides positive caster with the axle springs inflated and negative caster with them deflated and bottomed out. Deflating the bags takes 6.0 seconds and ensures proper

Does the vacation camper you leave in the yard most of the year overload your truck? Not with a loaddivider dolly.

passive steering when reversing. The third airbag compensates to maintain weight distribution when reversing.

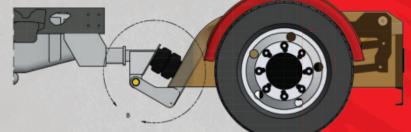
At 68 inches wide and 64 inches long, the dolly doesn't impinge on other lanes in tight turns, and at just 35 inches tall, most pickup tailgates can lower without hitting it. You can't attach additional trailers to the dolly, but Stross has demonstrated towing a fifth-wheel or gooseneck-type trailer using the dolly to redistribute the load. Doing this requires a hitch mounted well aft in the pickup box, 78 inches ahead of the trailer face to clear the dolly.

Stross' company, Canadian Load Divider Dollies, targets its Weight Distributing Trailer at individuals and fleet operators who only occasionally need to exceed their truck's GVWR. For example, cube truck repair fleets whose standard equipment load nears the GVWR, with certain heavy replacement parts putting them over; farmers whose half-ton trucks suffice except when transporting harvested crops;

or vacationers with heavy pickup-bed campers.

The initial WTD909 load-divider dolly is patented, and the company is ready to produce them. But it is shopping the concept around, looking for an order large enough to get production rolling at a price that will likely range between \$5,000 and \$7,000 Canadian each, depending on order size. In a perfect world, home-improvement stores would offer load-divider dollies for rent and require their use before knowingly allowing schmoes like me to overload their trucks.

A compressor on the tow dolly ensures the third airbag, which applies torque to shift the payload to the front axle, retains sufficient pressure to reliably share the payload between the front, rear, and tow dolly axles, preventing overload tickets.



Your Say...



WRITE US AT: 831 S. Douglas St. El Segundo, CA 90245 Email us at MotorTrend@MotorTrend.com



A Correction

I wanted to offer a correction to your article comparing the C8 Corvette to the Cayman GTS 4.0 in your August 2021 issue. When speaking of the new Tremec eight-speed dual-clutch transmission in the C8, you compared it to the C7's "quick shifting 10-speed auto." The C7 Corvette had GM's 8L90 eight-speed automatic. As far as the 10-speed goes, you may be thinking of Chevy's sixth-gen Camaro ZL1.

Thanks, and keep up the great work! I always enjoy reading the latest car comparisons and test drives in the magazine every month.

Zach Menning

via email

Great catch, Zach. You are correct: The C7 Corvette was available with an eight-speed automatic, not a 10-speed.—Ed.

Thoughts on the Future

Scott Evans' recent editorial on self-driving cars (September) hits a home run—thank you! I've worked in aviation as a licensed FAA airplane/jet mechanic for 46 years and finished my career at Boeing in aviation safety/human factors.

Airplanes have many autonomous functionalities: autopilot, altitude, heading, throttle, and takeoff and landing systems. But the pilot(s) must always maintain vigilance when it comes to manning all flight control, navigation, and communication systems. And when air traffic control relays instructions to the plane, the pilots, not the computer, must make the changes to ensure the plane does what ATC commanded. The computers frequently go inoperable; guess who flies the jets?

So I agree with your outstanding article, which was quite overdue. I had a financial adviser brag about running his Tesla on Autopilot while he read magazines in busy Seattle traffic. If there's a crash, who do you think the insurance companies will go after (assuming, of course, he lives through it)? Thanks again. I love the magazine. Keep up the great work.

Chris Nicosia

Federal Way, Washington

I'm sending you this note of appreciation for the Green Issue (June). I've owned a lot of cars over the years, but my Tesla Model 3 is by far my favorite. As almost everyone who experiences it says, "It feels like driving the future." Please continue to feature EVs and related topics in your magazine. Battery tech will inevitably progress, making electric propulsion an even more compelling alternative to internal combustion. More than that, the very name of your magazine suggests the future, in that *Motor* is the proper name for the drive in EVs, and the current *Trend* shows these vehicles represent where transportation is headed.

David Byres

via email

Your Green Issue was sad. I am old school, but the future doesn't look so entertaining, either in terms of driving vehicles or reading about them. Please don't neglect the essence of what your magazine is all about. Let's not make it *Electric Trend*.

Daniel Saenz

via email

Let's put this issue to bed: Whether a vehicle runs on gas, diesel, electricity, hydrogen, dreams, or delusions, if it's a new car, truck, or SUV, we will review it.—Ed.

Reader on Location

Saleem Khan of Bethesda, Maryland, is this month's Reader on Location. He writes: "I've been reading MotorTrend since 1989 and haven't missed an issue. Every time I go somewhere, I mean to send you a picture, but I always forget. But not this time. My family and I took a wonderful road trip up to Cape Cod, Massachusetts, from Bethesda, and we couldn't miss this fabulous Special Issue! Thanks for always being there for me all these years!" Thanks to you for being a loyal reader, Saleem!

Code Masters

I never write to magazines, but I just sat down with the September issue, and I have to say the QR codes in some articles are the best. [For readers unfamiliar, scan them with your phone's camera.—Ed.] If the print article just whets one's appetite, the QR code vaults the reader to a treasure chest of pics and in-depth coverage that's a delight to dive into.

Al Papillon via email



FIRST DRIVE | 2021 Ford Bronco FORD'S LONG-AWAITED BRONCO IS ABSOLUTELY LEGIT

WORDS AARON GOLD

he 2021 Ford Bronco is easily one of the most anticipated vehicles of our fledgling decade, and we won't keep you in suspense: Our initial impression after driving the new Bronco is that it absolutely lives up to the hype.

Driven on- or off-road, viewed as a getaway/adventure vehicle, a family truckster, or as a piece of retro automotive art, the Bronco feels like a winner. Indeed, Jeep's longtime off-road champ, the Wrangler, now has some serious competition, as does our 2021 SUV of the Year, Land Rover's epic Defender.

We had the Wrangler in mind as we saddled up a Bronco in Austin, Texas, for our first on-road drive. Our trusty steed was a midlevel four-door Black Diamond model with the 2.3-liter EcoBoost engine, manual transmission, and honest-to-goodness steel wheels. Hey, there were more lavish Broncos available to drive, but we can't resist a stick and steelies on a vehicle like this.

The Bronco made a positive first impression immediately. For starters, its cabin feels spacious and airy. While the Jeep's instrument panel and windshield sit so close to you that you can practically inhale them, the Bronco's dash does a better job of social distancing, and we appreciate the additional room.

If you've ever driven a first-generation Bronco, you'll warm to the view out over the new version's hood. The hood is broad and flat and outlined by flipped-up fender



edges, just like the original. Those visible edges, capped with load-bearing metal garnishes Ford calls "Trail Sights," come in handy when off-roading, which we'll talk more about shortly. The dash itself is a series of flat planes that recall the original Bronco, but Ford didn't let nostalgia get in the way of sensible design. The control layout is straightforward, the switchgear is easy to use, and well-placed grab handles help with the long climb into the front seats.

The four-door's back seats aren't quite so pleasant: They are mounted high, which is nice for visibility, but they're also thin, parsimoniously padded, and short on thigh support. The nicest thing we can say about them is they fold down easily to expand the roomy cargo bay, which is lined with hard (and, we hope, hardwearing) plastic. As you can surmise, the shorter two-door Bronco's rear seats aren't any better, but they are also more awkward to get into.

A push of the power button lit up our test truck's 2.3-liter turbo-four. This is the lesser of the Bronco's two powerplants, producing 300 hp and 325 lb-ft of torque. The optional 2.7-liter twin-turbo V-6 makes 330 hp and 415 lb-ft. Note these figures are for premium fuel; run your Bronco on regular, and the 2.3 loses 25 hp and 10 lb-ft, and the V-6 gives up 15 hp and 5 lb-ft.

The manual transmission is a sevenspeed gearbox, but the lowest gear is



Bronco makes off-roading easier for both first-timers and experienced rock crawlers.



conveniently marked "C" for crawl and requires lifting a collar to engage it, just like you must do for reverse. It's a ridiculously low gear ratio, and you won't want to use it for normal driving, nor could you: The shifter gate's design makes it difficult to shift quickly from C to the real first gear. For the purposes of pavement, this is a six-speed 'box. We slid the stubby shifter into first, noting its precise but notchy action, let out the clutch, and were away.

The rest of the transmission's gearing is excessively tall, and we had to change gears later than we normally would lest low revs magnify whatever turbo lag the 2.3-liter engine exhibits. As we charged up the steep inclines that give Texas Hill Country its name, we found we had to downshift often to fifth or fourth to maintain our mile-a-minute pace. Keep the revs up, and the Ford is pleasingly fleet, and of course this will be less of an issue for those who opt for the 10-speed automatic or the optional V-6.

As we bounced our way through the scenery, we reminded ourselves the new Bronco is designed for Wrangler-level off-roading, and with that caveat in mind, the ride is acceptable—livelier than

the average SUV's, to be sure, but rarely unpleasant and never uncivil. Straight-line tracking is impressive; thanks to the Bronco's independent front suspension, the horse goes where you point it with something that bears a strong resemblance to precision and stability.

Careening through the curves is something of an adventure: You know your destination (tire-howling understeer), but what the journey will provide is always a bit of a mystery. The steering feels less than linear in corners, and the Bronco's engineers quelled body roll in normal driving well enough that the yaw you experience in harder driving feels remarkably pronounced.

Driving a Bronco fast through twisty roads is not something we'd recommend to our friends, though it feels less discombobulated than the Wrangler in similar circumstances. Still, the Land Rover Defender reminds us it is possible to combine outstanding off-road competence with true curvy-road athleticism, something the Bronco can't quite manage. Oh, Ford, why did you ever sell Land Rover?

We experienced a significant amount of tire noise, and we also heard some

THE BRONCO PROVIDES EASY ACCESS TO THE OFF-ROAD TOOLS YOU NEED.

ROCK CRAWL

25 Institute 1438.6mm

wind whistle through the removable hard top's seams. Bronco engineers accused us of not securing the panels properly, but the latches are L-shaped affairs, and it's obvious when they are snapped home correctly—and they were snapped home correctly. These were pre-production models, so perhaps perfection was too much to ask. But the tops—easily removable via sections, most of which are light enough for a single person to deploy—have proven problematic in production, too, forcing replacements and causing assembly stoppages. The fine-sounding stereo did an excellent job drowning out this extraneous noise, which was impressive; the model we drove had the entry-level infotainment system.

On-roading, however, was only half of our drive. Ford also arranged a demonstration of the Bronco's off-road abilities at the Bronco Off-Roadeo site in Texas, one of four off-road experience centers spread country-wide where Ford will offer complimentary off-roading demos and lessons to Bronco owners.

The company has a lot to prove here. The Wrangler makes the on-road sacrifices it does in the name of exceptional off-road aptitude, and the Bronco's use of an independent front suspension rather than a live axle is bound to earn derision from the Jeepisti. However, as an out-of-the-box off-roader, the Bronco appears extremely capable.

Ford engineers onsite for the Bronco's drive event told us one of their design goals was to help amateur off-roaders drive competently and confidently and for experienced off-roaders to do what they know how to do with greater ease. The philosophy encompasses both the machinery and its interface, and the execution is laudable. The new Bronco doesn't necessarily take the skill out of off-roading (though it can if you desire); rather, it provides easy access to the tools you need, when you need them.

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FIRST DRIVE | 2021 Ford Bronco



All 2021 Broncos come with fourwheel drive, and buyers can choose from two transfer cases. Both are electronic and come with low ranges, but the more advanced case has a "4 Auto" setting that engages front drive automatically when the rears begin to slip.

The Bronco's terrain-response system has a variety of drive modes, the exact number varying by trim level. All are capable off-road, but the optional and ridiculously named Sasquatch package bundles 17-inch beadlock-capable wheels with 35-inch tires, increased ground clearance, front and rear locking differentials, a shorter final drive ratio, and remote reservoir dampers.

It's notable Ford offers this package on the base model Bronco; Jeep requires you to buy a higher-trim Wrangler to get similar goodies. Switches for the various lockers and off-road driving aids are located conveniently in a row atop the dash, which makes them feel more like driver tools and less like cheats.

We drove a variety of Broncos on a collection of courses that included rock crawling, river wading (to show off the vehicle's up-to-33.5-inch water fording depth), and mud, mud, mud. We expected Ford to design an off-road course that would show the Bronco in its best light, but we've done enough off-roading to know the terrain we tackled requires serious hardware—in other words, these weren't trails you could drive in your Honda CR-V. The Bronco did everything we asked it to, but most significant was the ease with which it did so.

The optional camera setup—
we preferred the split view of the
front bumper cam and the top-down
360-degree view—all but eliminates the
need for a spotter. If the Bronco starts
to slip while climbing a rock, dash-top
buttons lock the front and rear diffs
(either or both, which is notable; in
a Wrangler, you can't lock the front
differential independent of the rear).
Need more articulation? Unlock the
front anti-roll bar with another button



press. Don't know which buttons to use? The Bronco's terrain modes, accessible via a rotary dial ringing the transfer case switch, will pick a baseline setup for you.

One of our favorite features is Trail Turn Assist, which brakes the inside rear wheel to help bend the Bronco around sharp turns. It's especially helpful with the longer-wheelbase four-door model. If the terrain looks too intimidating, there is also a crawl control feature, which will keep you moving at a speed you set in half-mph increments, uphill or down. This same system also offers a one-pedal driving mode; pressing the accelerator moves the car, and easing up or releasing it applies the brakes, allowing you the precision of the crawl control system with more direct and immediate speed control. All this hardware provides a combination of prowess and ease of operation that sets the new Bronco apart from off-roaders that either do everything for you or require you to do it all yourself.

Our initial opinion of the 2021 Ford Bronco may well be irrelevant, as Ford has sold out the first year's production, and probably the second year's, as well. The best we can do is to tell those who have already put down a deposit, if their expectations are geared to an off-road vehicle, they are unlikely to be disappointed. We're eager to experience more Bronco, including more seat time in the two-door and V-6 models, and putting them through our thorough testing regimen.

Something else excites us: There's no way Jeep is going to stand pat in the face of this new and very real Bronco threat, and we predict massive and enticing improvements for the next-generation Wrangler. Perhaps General Motors will also get into the game and replace the trendy but tame Chevrolet Blazer with an off-roader worthy of the name. GM certainly has the hardware, proven by the ZR2 version of the Colorado.

Yes, the 2021 Ford Bronco is a strong contender, and the SUVs it competes against are only going to get better, too. We can't wait.



FIRST FACE-OFF

HOW THE BRONCO STACKS UP TO THE WRANGLER IN USER FRIENDLINESS

e haven't yet had the opportunity to pit the new Bronco against the benchmark Wrangler in a no-holds-barred off-roading test, but we certainly will do so soon. In the meantime, following our Bronco first drive experience, we looked at how the basic vehicles compare in terms of common features that potential customers will use and experience every day. We recently had access to a 2021 Ford Bronco Outer Banks (a more onroad-oriented version) and a 2021 Jeep Wrangler Unlimited Rubicon 4xe, and we looked at things like their removable doors, interior usability, visibility, open-air experience, and cargo area.

Removable Doors

Both the all-new Bronco and the Wrangler have removable doors, but each manufacturer approached the engineering in different ways. The Jeep's doors are tall and support the mirrors,

making them somewhat awkward to move and store once you pull them. Ford gave the Bronco a frameless window design and kept the mirrors mounted to the car's cowl, making the doors very compact. In fact, four-door Bronco owners can carry all four doors upright in the cargo area. This also means they don't have to think about an aftermarket solution for mirrors when the doors come off to legally drive their rigs doorless on the pavement.

Although this might be a big selling point for Ford, Jeep fans will tell you they like having the mirrors stay with the doors, especially when they plan to take their Wrangler on tight trails where the giant Bronco mirrors could become a liability. The Jeep camp will also tout the Wrangler's exposed door hinges, which make removing the doors an easier affair than on the Bronco; the Ford's hidden hinges require precision to reinstall the doors without marring the paint.



Interior Battle

One area where the Bronco Outer Banks should really shine is its interior, which boasts a user-friendly layout, especially for secondary controls, and modern technology. A high-resolution 12.0-inch display dominates the dash, and the center console eschews manual four-wheel-drive controls in favor of electronic selectors. The latter free up console space for additional storage







he Bronco Outer Banks trim falls above Base, Big Bend, and Black Diamond but below Badlands, Wildtrak, and First Edition in the model lineup. Jeep of course will sell you 17 styles of Wrangler (including three versions of the 4xe PHEV model). The four-door, 116.1-inch-wheelbase Bronco Outer Banks starts at \$42,945, slotting between the \$40,745 Wrangler Sahara and the \$44,340 Sahara Altitude. Options, however, exist, so this particular Bronco Outer Banks had an as-tested price of \$53,655.

You can opt for an Outer Banks with Ford's 2.3-liter turbo I-4; this one came equipped with the \$1,895 2.7-liter twin-turbo V-6. The Outer Banks trim only comes with a 10-speed auto, but you can't get any manual Bronco with the V-6, which is the engine to have. This Bronco tipped our scales at 4,828 pounds; to put that in perspective, a Jeep Wrangler Unlimited Sahara ("Unlimited" is Jeep-speak for four doors) with a 3.6-liter V-6 weighs 4,391 pounds.

The wind noise we experienced from the multipiece hard top during our first drive was an issue here, too. Even with the optional sound-deadening headliner, at right about

70 mph, the cabin sounds as if the windows are open.

The engine's 315 hp and 410 lb-ft (330 hp and 415 lb-ft with 93-octane gas) make the Bronco feel quick off the line, a sensation helped by the 10-speed's gearing. But the Bronco seems to run out of steam as you keep your foot in it. We recorded

a 6.6-second sprint to 60 mph and a 15.2-second quarter mile at 91.0 mph. The less powerful (but lighter) Wrangler Sahara makes 285 hp and 260 lb-ft, yet it hits 60 mph in 6.9 seconds and runs the quarter in 15.3 seconds at 89.9 mph. Despite the extra weight, the Ford's two turbos and 50-lb-ft (at least) torque advantage mean the Bronco should be quicker than it is. However, the engine will only rev to about 2,000 rpm while holding the Ford on the brakes for a hard launch, so there is always turbo lag off the line. Real-world passing power, however, is good.

We discovered a meaningful difference when it came to braking. The Bronco stopped in 136 feet from 60 mph; the Wrangler needed 128. That's about half a car length of advantage to the Jeep (the Bronco is 15.8 feet long; the Jeep is an inch shorter), a big deal in a panic stop. In fact, the Wrangler Sahara has the second-best stopping distance of any JL Wrangler we've tested. (The best was a two-door Sport, at 126 feet.) Most Wranglers we've tested are big-tired Rubicons and stop from 60 mph in the 140-plus-foot range.

In our figure-eight test, the Outer Banks put down a 28.7-second lap, whereas the Sahara did it in 28.3. The Jeep understeered less, but neither time is particularly good, as both are in the pickup realm. Of course, at-the-limit track handling shouldn't affect your off-road SUV buying decisions.

Numbers aside, you must look at the front axle to really understand how the Bronco differs from a Wrangler in terms of driving. The Jeep has a live front axle and recirculating-ball steering. The Ford has independent front suspension along with rack-and-pinion steering. With the lone exception of the V-8-powered Wrangler 392, it's rarely fun to drive a Wrangler on pavement.

The Bronco? What a blast! Playful, tossable, hysterical—just straight-up fun. Understeer? Sure, but there's enough turbo torque to induce a bit of oversteer once the Outer Banks passes the apex. We found the same on the figure eight—there's not a lot of tire grip, and the Bronco understeers dramatically until the exit, but then we would floor it and the Ford would drift slightly. This dynamic characteristic equals big fun in the real world. Jonny Lieberman



2021 Ford Bronco Outer Banks	
BASE PRICE	\$42,945
PRICE AS TESTED	\$53,655
VEHICLE LAYOUT	Front-engine, 4WD, 5-pass, 4-door SUV
ENGINE	2.7L/315-hp/410-lb-ft turbocharged DOHC 24-valve V-6
TRANSMISSION	10-speed automatic
CURB WEIGHT (F/R DIST)	4,828 lb (55/45%)
WHEELBASE	116.1 in
LXWXH	189.4 x 75.9 x 73.0 in
0-60 MPH	6.6 sec
QUARTER MILE	15.2 sec @ 91.0 mph
BRAKING, 60-0 MPH	136 ft
LATERAL ACCELERATION	0.72 g (avg)
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and added features, such as a wireless charging pad. However, the Bronco suffers from ill-fitting pieces, a mix of cheap plastics with visible gaps and seams, and parts that don't feel attached to the vehicle particularly well.

Despite having less storage and a smaller but still high-res 8.4-inch screen, everything in the Wrangler Rubicon 4xe is within reach and is easy to operate. We much prefer the mechanical shifter's positive engagement and the old-school handbrake, which allows for some fourwheel-drive techniques not possible

with the Bronco's electric parking brake. The Wrangler is also much better at telegraphing information to the driver. Whereas the Bronco's driver display feels overly styled and gimmicky, the Wrangler's still feels modern with its configurable and clean information center, even offering a mechanical tachometer, which is much easier to read than the Bronco's strange digital execution.

Ford and Jeep also approached the grab handles differently, with the Bronco's grab handles located at the edges of the dash and one down by the passenger's knee. Each one feels like you could yank it right off with a stout tug. Conversely, the Wrangler has A-pillar-mounted handles and a dash-mounted passenger grab bar that feel sturdy enough to tie a tow strap to for recovering another vehicle stuck in the mud (but don't try this).

Vision Quest

Outward visibility is important in any off-road vehicle, and both the Ford and Jeep are designed to maximize driver awareness of outside surroundings. The Bronco has great camera views to supplement the generous side glass area afforded

by the frameless windows. To combat its tall fender creases, Ford installed those "Trail Sights" to let the driver know exactly where the Bronco's front corners are. To the rear, the Bronco is a little more restricted with its step-up beltline and high-mounted spare tire.

The Wrangler has great forward visibility thanks to a tapering nose and a forward-facing TrailCam. In back, it offers more glass where you want it, making rearward and over-the-shoulder visibility better than the Bronco's.

Open-Air Experience

Both vehicles offer a great open-air experience, though the Bronco's is better thanks to a halo-style rollcage that omits







the crossbar over the B-pillar for the ultimate openness for rear passengers. That is, if you can get the tops off. With our test vehicle, the factory roof rack prevented us from removing the rear top panel, limiting our open-air fun.

The Wrangler doesn't offer a factory roof rack, but it also doesn't offer a removable panel over the second row like the Bronco does. Jeep's counter is the powered Sky One-Touch roof, which gives everyone an open-air experience at the touch of a button. With this top, you can unlock more openness by popping out the rear-quarter glass.

Rear Cargo Area

Cargo areas are extremely important for any adventuring SUV, and the Bronco and Wrangler are very similar in this

LIVABILITY COMPARISON

regard. We give the slight edge to the Jeep because it has six tie-downs instead of the Ford's four, plus more sculpted interior panels that allow for extra places to stuff gear, and a tailgate design that requires less force to open. Both vehicles are comparable in the amount of dust intrusion that sneaks past the rear seals.

Which Way to Go?

Both the 2021 Ford Bronco Outer Banks and 2021 Jeep Wrangler Rubicon 4xe are excellent machines that do incredible things no other vehicle on the market can accomplish. Ford did an outstanding job with the Bronco, and it is well matched to the Wrangler.

However, the Ford Bronco isn't perfect. Although it has a leg up in modern tech and interior amenities, it falls short in the details of fit and finish as well as materials quality. In everyday usability, the Jeep Wrangler's details feel more refined. The Jeep also enjoys superior assembly polish and materials, and it does the little things well.

For now, and in the context of this specific livability comparison, the Wrangler gets our nod. ■







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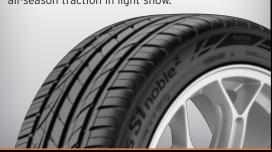




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QUADRIFOGLIO AND
M3 COMPETITION FACE
OFF TO IDENTIFY THE
ULTIMATE CHAMP

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Alfa Romeo Giulia Quadrifoglio vs. BMW M3 Competition | COMPARISON

n paper, the attractive Alfa Romeo Giulia Quadrifoglio and the new, funky-looking 2021 BMW M3 Competition are spun from the same bolt of carbon-weave cloth. Both cars are rear-wheel-drive, front-engine members of the

compact executive sedan segment. Each boasts a twinturbo six-cylinder engine displacing about 3.0 liters. The Alfa and BWM share the same ZF-sourced eight-speed automatic transmission and nearly identical power output just a tick beyond the 500-horsepower mark.

Pricing—both starting and as tested—parallel each other, as well. BMW requires \$73,795 for the basest of the base M3 Comp, while Alfa demands \$76,095 to get things started with its arrabbiata Quad. Our test-car examples sit at a hefty \$93,945 for the Italian and \$97,645 for the bright yellow German, so ignite your checkbook if you want to re-create our pairing.

If you limit your afternoon reading exclusively to our spec charts that follow in this piece, then this comparison test is a meeting of technical equals with only a few minor exceptions. In practice and on the charge, however, the M3 Competition and Giulia Quadrifoglio couldn't be more dramatically different in terms of their ethos.

A portion of this perceived imbalance is objective. Before we even have a chance to weigh the sensory and tactile differences between the M3 and the Quadrifoglio, the BMW gaps the Alfa on

No, we don't know why BMW thought

the Pontiac G6 GXP

was a design worth

emulating. Despite the nostrils, we have

several nice things

our test track with tires ablaze and ass akimbo. In Competition form, the M3's 502-hp engine is just short of the 505-hp Alfa. But it spreads an extra 36 lb-ft of torque on its rear Michelin Pilot Sport 4S tires like cold butter on toast.

The two supersedans were dead even off the line, right up to the 50-mph mark where the BMW pulled ahead by 0.1 second, and then by 0.2 second at 60 mph. The Alfa took 3.7 seconds to cross that magic 60-mph mark, while the M3 took just 3.5. The Giulia continued to wilt under the M3's torquetastic hammer, with the BMW claiming a 0–100-mph scramble in just 7.5 seconds, bettering the Alfa's quick-but-not-quick-enough 8.3-second run. The M3 Comp needs 11.6 seconds to conquer the quarter mile at 125.6 mph, a 0.3-second and 5.5-mph advantage over the Alfa.

Big power and big performance, meet big rock country: Tired of our usual vehicular stomping grounds, we put the full extent of these sedans' trans-county capabilities to good use escaping the gravitational tug of the greater Los Angeles metroplex. For two days, the slash of jagged land bordering Death Valley and the Inyo National Forest was our playpen. The locales offered secluded mountain passes that wiggled past campgrounds, and grit-washed desert highways that speared unbroken into the horizon.

Between L.A. and this delicious wasteland is a stretch of semi-populated California highway that's best endured rather than enjoyed, no matter how quick the car or daring the driver. It's a perfect opportunity to futz and fiddle with the







interior accoutrement and assess baseline road manners. This was an important part of the test, considering these are supposed to be the do-it-all multitools of the performance car pie.

Just a few miles from our office in El Segundo, the M3 Competition already proved itself a bit of a bummer, at least for some of us. Test co-driver and features editor Scott Evans quickly found the new 2021 M3's hyperaggressive seats sadistic, its user interface frustrating, and its infotainment system Kafkaesque.

"These might be the least comfortable seats I've ever experienced in a production car, and I include every racing seat and carbon-fiber bucket I've ever sat in," he snipped. "If you plan to do a lot of racetrack time with this car, maybe go ahead and get these seats, but only if you plan to make it a permanent track car or you are willing to buy a second set of normal seats for all the other times you might want to drive it."

Your derrière won't be the only thing stunned numb. When viewed directly from the front—an inadvisable activity for which we recommend wearing solar-eclipse glasses—the new M3 Comp is an astoundingly ugly car. To our eyes it looks

like someone styled a normal BMW 3 from 10,000 feet down in the ocean, then shot it to the surface where it rapidly decompressed like some sort of automotive blobfish. In our 14.7-psi sea-level world, that type of weird just doesn't work, and no, it hasn't improved since we first saw it. The pretty-ish Alfa Romeo Giulia Quadrifoglio is a veritable master class in design when lined up against the German.

"I briefly considered running the M3 into the Alfa in hopes that some of the Giulia's beauty would rub off on it, only to dismiss the idea under the rightful fear of achieving the exact opposite," Evans said after his highway stint in the BMW.

Much of our BMW complaining subsided after we slipped from the highway and planned our charge up the side of Mount Whitney. In many ways, the new G80-generation M3 Competition feels like a tight-lipped half apology for the rather brutish F30 M3/M4 cars it replaced. Our complaints with the prior car were numerous: vague, cinderblock-heavy steering; a jerky dual-clutch transmission; a bind-prone (at low speed) rear axle; and the S55 3.0-liter engine that sounded like a brass can of rich schnitzel-fed farts. And crucially it

According to the specs, these two takes on twinturbo six-cylinder power achieve roughly the same output, but the BMW feels far more powerful behind the wheel.

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delivered too much power down low, with a greasy rear end that hopped, skipped, and smoked with careful inputs beyond moderate throttle.

Naturally, the Munich Maniacs figured more power was the solution, so the new 2021 M3 still incinerates the rear rubbers like flash paper with an absolute ripper of an engine. The new S58 twin-turbo I-6 proves that while BMW pivots toward

electrification, it still has plenty of internal combustion know-how. The 503-hp rating is merely a suggestion; it must make that much at the wheels, because this 3.0-liter pulls like something closer to 550 hp. It both feels and sounds extraordinarily power-dense, like a leaf blower dealing with a pile of honed titanium wind chimes.

The Alfa's 2.9-liter Ferrari/Maseratisourced twin-turbo V-6 feels every bit of its 505 hp and 443 lb-ft—no more, no less. The initial syrup-thick charge tapers off soon after you cross the upper end of highway speeds, while returning a muted, fuzzy soundtrack rather unbefitting of its Maranello origins. It's not an unpleasant sound, but it's a one-dimensional blat drowned by the M3's volcanic crackle.

Happily, the M3 Comp drives far better than it looks, and the Giulia Quadrifoglio drives more thrilling than it sounds. The main event of this brief desert sojourn was an empty mountain road that does a stunning Yankee impression of Italy's Stelvio Pass. But before we could splatter the rear panels in molten rubber, we idled at the mountain's base, twiddling with assist



systems and drive modes to put both cars into their max-attack stance.

More frustrated grunts emanated from the M3's open window while properly locking in the BMW's drive settings for the first time. Navigating complex menus, submenus, and sub-submenus was a total pain. Serenity kicked in only once our preferences were mapped to the bright red "M1" and "M2" antennae buttons jutting from the upper sides of the steering wheel center. Afterward, you just toggle between the two for your desired preset profile.

The Alfa continued to be the Bizarroworld alternative to the M3. It's dead

simple—too simple, really. The rotary drive mode selector on the center console offers four choices, only two of which are noteworthy for fast driving.

Like the M3 Competition, the Giulia Quadrifoglio rides on adaptive suspension. Unlike the BMW, you cannot independently increase suspension stiffness outside the drive modes the various stiffness settings are tethered to. You can, however, decrease it. The Alfa's suspension is set to medium stiffness in Dynamic mode, with the driver given the option to soften things by poking the suspension button located in the center of the drive

mode selector. We found Dynamic mode too soft, so we skipped straight to Race mode, where the suspension is at its hardest, and where you are able to, if you prefer (we didn't), toggle down to Dynamic mode's middle setting for extra comfort.

Frustratingly, engaging Race mode also forces the stability and traction control off, so you can't access the stiffest suspension without also running your 505-hp monster without driver aids. Fine on the track, but it's initially frustrating and nerve-wracking on a mountain pass with unprotected drop-offs.



COMPARISON

After just a few corners, our concerned scowls flipped into open-mouthed grins. It's simply beautiful to drive. The steering is wonderfully delicate, giving you intimate control of the sweetest modern rear-drive sedan chassis on the market. Even with all assist systems off and a massively heavy right foot, the Giulia is unshakably neutral with just a smidge of understeer until you act like an absolute moron. Then the rear swings out fluidly with all the predictability of finding a burger wrapper in a McDonald's trash can. Catch, correct, and charge hard down the straight. Too fast? Dance on the cheek-rippling carbonceramic brakes that gave us only the slightest bit of fade during hard back-toback sprints. The brake-by-wire system is too touchy for smooth commuting, but the instant bite and neck-wrenching stopping power are almost worth the binary behavior. This Quadrifoglio feels like an M3 by way of Ferrari. A corny sentiment, perhaps, but it's the best way to describe just how sweet the car slips around.

"This is a company that gets it," Evans said. "It's incredibly engaging to drive and draws you in with its personality. You really feel like you're driving fast and having the time of your life."

If the Alfa is a careful caress, the new M3 Comp is a dark-alley sucker punch to the skull. If you covet outright capability, stop reading here and mark down the M3 as the winner. The G80 M3's pace, limits, and brutal capability are fantastic; even the quicksilver Giulia fell a step behind when the BMW's wick burned at full flame. The M3 absolutely rips up a mountain when it's driven correctly; it's enormously capable, more so than the Alfa.

Capable doesn't always mean better. In sharp contrast to the prior M3's/M4's concrete-thick steering weight, the 2021 version's inputs are as light as soap foam. Steering is quick and very predictable, but it's not great in terms of feel. In fact, the Alfa is a great example of how to do light steering without giving up too much grain.



The BMW's ceramic brakes—though potent—suffered the familiar pedal mushiness we've experienced in recent BMW M products. Whether the culprit is a set of slag-prone street-focused brake pads or low-temp brake fluid, modern M cars' brakes go soggy quicker than do those of its competitors.

The M3 Competition was violence in motion through the gravel-strewn hairpins. Compared to the floor-it-anywhere Alfa, the BMW required a much gentler touch on the loud pedal—that is, if you followed the path of max efficiency. Unlike the Giulia, we left all the M3's assist systems on. If we fed more than half

throttle at the corner exit, the rear end teeter-tottered ever so slightly under the restraint of the driver aids.

Even with that spooky rear action, the M3's explosive forward motion remained unaffected; just make sure everything is set up correctly. Driven fast in lesser modes, the BMW seems to transfer way too much power across the rear axle, and it makes the car feel overpowered and unstable. On the other hand, in the right modes, it puts down power incredibly well.

Both cars provided a case study of just how far automatic transmissions have







come in the past decade. Again, these two share a ZF eight-speed, giving us a rare chance to experience marque-specific differences between what is essentially the same crate of gears. We had no complaints about the BMW; shifts were snappy when we wanted them to be and subtle when we didn't, and BMW's shift logic is one of the better examples on the market. Not once did we miss the clattery dual-clutch from the previous car, as the ZF provided all the quick-shifting upsides with none of the loud, balky downsides.

The Alfa's eight-speed was similarly quick-shifting, but its shift logic while in max-aggro mode was best avoided by manually shifting via the paddles or console shifter. The transmission guffawed occasionally in some of the sharper, slow corners, cutting power and limiting revs to a couple thousand below redline. No warnings flashed, so we assumed it was a bug and carried on.

Two cars, two personalities, one winner. In terms of raw speed, the trophy goes without a doubt to the M3 Competition.





2020 Alfa Romeo POWERTRAIN/CHASSIS Giulia Quadrifoglio		2021 BMW M3	
· · · · · · · · · · · · · · · · · · ·	Front-engine, RWD	Competition	
DRIVETRAIN LAYOUT	Twin-turbo 90-deg V-6, alum	Front-engine, RWD	
ENGINE TYPE	block/heads	Turbocharged I-6, alum block/head	
VALVETRAIN	Direct-injected DOHC, 4 valves/cyl	Direct-injected DOHC, 4 valves/cyl	
DISPLACEMENT	176.4 cu in/2,891cc	182.6 cu in/2,993cc	
COMPRESSION RATIO	9.3:1	9.3:1	
POWER (SAE NET)	505 hp @ 6,500 rpm	503 hp @ 6,250 rpm	
TORQUE (SAE NET)	443 lb-ft @ 2,500 rpm	479 lb-ft @ 2,750 rpm	
REDLINE	6,700 rpm	7,200 rpm	
WEIGHT TO POWER	7.6 lb/hp	7.4 lb/hp	
TRANSMISSION	8-speed automatic	8-speed automatic	
AXLE/FINAL DRIVE RATIO	3.09:1/1.98:1	3.15:1/2.02:1	
SUSPENSION, FRONT; REAR	Multilink, coil springs, adj shocks, anti-roll bar; multilink, coil springs, adj shock anti-roll bar; multilink, coil springs, adj shock anti-roll bar adj shocks, anti-roll bar		
STEERING RATIO	11.8:1	15.0:1	
TURNS LOCK TO LOCK	2.2	2.0	
BRAKES, F; R	15.4-in vented, drilled carbon- ceramic disc; 14.2-in vented, drilled carbon-ceramic disc	15.7-in vented, drilled carbon- ceramic disc; 15.0-in vented, drilled carbon-ceramic disc	
WHEELS, F; R	8.5 x 19-in; 10.0 x 19-in 9.5 x 19-in; 10.5 x 20-in forged aluminum forged aluminum		
TIRES, F; R	245/35R19 93Y; 285/30R19 98Y Pirelli P Zero Corsa AR Asimmetrico	275/35R19 100Y; 285/30R20 99Y Michelin Pilot Sport 4S	
DIMENSIONS			
WHEELBASE	111.0 in	112.5 in	
TRACK, F/R	61.2/63.3 in	63.7/63.2 in	
LENGTH X WIDTH X HEIGHT	182.6 x 73.7 x 56.1 in	189.1 x 74.3 x 56.4 in	
TURNING CIRCLE	37.0 ft	40.0 ft	
CURB WEIGHT	3,818 lb	3,745 lb	
WEIGHT DIST, F/R	53/47%	53/47%	
SEATING CAPACITY	5	5	
HEADROOM, F/R	38.6/37.6 in	40.6/37.8 in	
LEGROOM, F/R	42.4/35.1 in	41.6/35.6 in	
SHOULDER ROOM, F/R	56.1/53.6 in	56.0/54.6 in	
CARGO VOLUME	13.4 cu ft	13.0 cu ft	
TEST DATA ACCELERATION TO MPH			
	1/	1/	
0-30	1.6 sec 2.2	1.6 sec 2.2	
0-40			
0-50 0-60	2.9 3.7	3.5	
0-70			
0-80	5.7	5.3	
0-90	6.9	6.4	
0-100	8.3	7.5	
0-100-0	12.1	11.3	
PASSING, 45-65 MPH	1.6	1.4	
QUARTER MILE	11.9 sec @ 120.1 mph	11.6 sec @ 125.6 mph	
BRAKING, 60-0 MPH	99 ft	102 ft	
LATERAL ACCELERATION	0.97 g (avg) 1.03 g (avg)		
MT FIGURE EIGHT	24.0 sec @ 0.82 g (avg) 23.8 sec @ 0.85 g (avg)		
TOP-GEAR REVS @ 60 MPH	1,700 rpm	1,500 rpm	
CONSUMER INFO			
BASE PRICE	\$76,095	\$73,795	
PRICE AS TESTED	\$93,945	\$97,645	
AIRBAGS	8: Dual front, front side, f/r curtain, front knee		
BASIC WARRANTY	4 years/50,000 miles	4 years/50,000 miles	
POWERTRAIN WARRANTY	4 years/50,000 miles	4 years/50,000 miles	
ROADSIDE ASSISTANCE	4 years/Unlimited miles	4 years/Unlimited miles	
FUEL CAPACITY	15.3 gal	15.6 gal	
EPA CITY/HWY/COMB ECON	17/25/20 mpg	16/23/19 mpg	
RECOMMENDED FUEL	Unleaded premium	Unleaded premium	
ON SALE	Now Now		

But if this was just a spec-panel showdown, what's the point of all those accumulated miles? The BMW is barbarically quick by every parameter, but there's nothing joyful about the way it scours a path. It's clinical and cold, and it spat us out at the end of the mountain road not with a "Wow!" but with a "Yeah, that's about right" reaction. Still, if you seek a reasonably comfortable, well-appointed four-door that could moonlight as a terrestrial Mach 3 reconnaissance craft, it's a good place to start. This assumes you can stomach its ugly mug and you leave the unforgiving seats on the shelf. A great car, a good experience.

As capable as the BMW is, the Alfa Romeo Giulia Quadrifoglio is driving ambrosia. There wasn't a stretch of paved road the Alfa didn't flow down like melted garlic butter. And as the gap between the BMW and Alfa grew on the straights, so did our grin; the Alfa just gave us more room to poke and prod its limits on our own time. The car is rewarding to drive fast, easy to drive slow, nice to look at, and simple to operate, and it positively crackles with personality. A great car, a great experience.

2ND PLACE: M3 Competition PROS

- Spectacular engine with brutal power
- Reasonably comfortable when not in most aggressive setting
- Extraordinarily easy to drive extremely quickly
- One of the most capable sedans you can buy

CONS

- Ultra-light steering
- Mushy brakes at times
- Comes off as a bit joyless
- Look at it

VERDICT A sport sedan sledgehammer that makes hay with speed more than finesse.

1ST PLACE: Giulia Quadrifoglio PROS

- Delectable steering
- Excellent chassis
- Delightful day-to-day ride comfort
- Dazzling brakes

CONS

- Silly suspension settings
- Rudimentary drive modes
- Brake-by-wire system too aggressive for daily use
- Engine sound could be more exciting

VERDICT A beautifully flowing, rewarding car that makes you forget about numbers and focus on the experience. ■

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COMPARISON TEST | Honda CR-V vs. Hyundai Tucson vs. Nissan Rogue vs. Toyota RAV4

hink of compact SUVs, and chances are the Honda CR-V and Toyota RAV4 come to mind. They've dominated sales charts the past few years, and each has a long history of loyal customers who return to buy or lease the latest versions.

Although the RAV4 is the sales leader, with more than 430,000 units moved in 2020, the CR-V is no small player—Honda sold 333,000 last year. But as the segment grows more competitive, automakers are equipping their crossover SUVs with cutting-edge tech, cool designs, and spacious interiors. Take the Nissan Rogue and the Hyundai Tucson, for example; they aren't as popular as the Honda and Toyota, but their latest generations are more attractive and tech-rich than ever.

To make this comparison as fair as possible, we asked the participating automakers to send us their top-trim models with all-wheel drive. The 2021 Nissan Rogue SL we received wasn't the ladder-topping Platinum trim, but it was nevertheless decently equipped with the Premium package. Powered by a 2.5-liter four-cylinder engine making 181 horsepower and 181 lb-ft of torque, the Rogue employs a continuously

variable transmission to send power to all four wheels. Our test model carried a \$36,805 price tag, a decent value for the features it included.

The 2022 Hyundai Tucson is all-new this year, and it was represented by the Limited version. Its 2.5-liter four-cylinder engine makes 187 hp and 178 lb-ft and is mated to an eight-speed automatic. At \$37,580, it comes with a ton of technology, a bigger cargo area, and more passenger space than before.

As the second most popular crossover SUV, the Honda CR-V has many things to like, particularly its value. At \$36,325, the CR-V was the least expensive model we tested, and that was despite being represented by the top-of-the-line Touring model. Its 190-hp 1.5-liter turbo-four engine is paired to a CVT.

The 2021 Toyota RAV4 has proven to be an attractive proposition. With its 203-hp 2.5-liter four-cylinder engine, it's also the most powerful SUV of this group, and it features an eight-speed automatic. As the range-topper, the Limited's starting price is just north of \$37,000, and our model included a couple of packages that raised its price to \$40,451, the highest in our test.





The CR-V's tech is showing its age. A 7.0-inch touchscreen is small in today's market, and the infotainment system seems a decade old. However, interior space and packaging remain tops in the segment.



Particularly tactile HVAC knobs, a decentsize screen, and a tray built into the right side of the dash make the RAV4's cabin stand out. Still, at \$40,000 we'd like to see a powered front passenger seat.



to reach 60 mph—the slowest SUV of the group. Its suspension also disappointed us as the harshest in this test, though excellent body control was the payoff.

The RAV4's punchy engine showed well on our test loop, and the vehicle.

well on our test loop, and the vehicle was the most fun to drive overall in this group. That's no small compliment; the RAV4 delivers great acceleration, and its body motions are well controlled on poor pavement or twisty roads, as we found on our drive along Southern California's Palos



Verdes Peninsula. Its sometimes raucous engine note is a bit bothersome, but the Toyota delivers an enjoyable experience behind the wheel.

For its part, the Rogue is more unsettled, particularly through Portuguese Bend, an area of our loop where constant land movements make the pavement quite bumpy. One of our drivers likened the experience to trying to run in work boots. The Rogue's engine has decent power, and its CVT represents a marked improvement over that of the previous generation. The transmission still isn't as smooth and unobtrusive as Honda's, but the engine note is more subdued even as the four-cylinder itself seems eager to deliver its power.

Honda's CR-V is the oldest SUV in the group, but it comes across as "experienced" rather than "outdated." Indeed, despite the arrival of new players, it continues to impress with its feel and handling. Its steering is direct and properly weighted, its suspension absorbs big bumps



As close as these SUVs are in terms of

power and engine displacement, each

offers a different driving experience. In

transmission grabs for high gears with

the interest of fuel economy, the Tucson's

fervor, often reducing available torque at

a given time. And when exiting a corner,

the gearbox takes a moment to catch its

breath before downshifting. The Tucson

also felt lethargic when merging onto the

freeway, something we verified at our test

track, where the Hyundai took 9.3 seconds





As the newest player in the game, the Tucson arrived with big displays and plenty of technology. We're fans of the cabin's stylish design and appreciate the extra space it has versus the outgoing Tucson.





Despite our Rogue not being the top trim, the SL with Premium package is well equipped. The infotainment system has sharp, easy-to-read graphics and wireless smartphone connectivity.



spectacularly, and despite being the least powerful, it was the quickest to reach 60 mph. Of course, it has its flaws: Push it hard, and the engine gets pretty rowdy. And truth be told, its body control isn't as sharp as the RAV4's.

As well as the CR-V hides its age on the road, its cabin shows wrinkles. Its 7.0-inch screen seems minuscule, and its infotainment system is old and lacks the cool graphics and quick processing speed we expect. Overall, portions of the CR-V's interior design-particularly the center dashboard-could use an upgrade.

Honda

Yet there's even more to like about the Honda. The versatile center console is among the segment's best, and we applaud the CR-V for its great ergonomics, clever use of space, roomy interior, and nearly flat floor in the second row. Whiz-bang gadgets may not be this SUV's forte, but its versatility and packaging continue to stand as solid selling points.

The Tucson sits at the other end of the spectrum. Its massive 10.3-inch touchscreen and identically sized digital instrument cluster seem pulled straight from a Mercedes-Benz. Its designers paid close attention to details, like the strip of chrome and piano black that runs from one door panel and across the whole dashboard until it reaches the other side. It's things like this that help an SUV stand out in such a crowded segment. The materials also feel premium, and the second row is spacious and airy-a large improvement over the previous model. The Hyundai wins for features per dollar, including its Smart

Park function that can remotely move the Tucson in or out of a tight parking space.

Although the Rogue isn't as feature-rich as the Tucson, this latest edition, redesigned for 2021, is packed with nice details and handsome design. The three-tone interior in ours made a good impression with plenty of leather and attractive stitching adorning the door panels and dashboard, and the fake wood even looks great. A new shifter design adds to the appeal: It feels modern and sleek while making the center console spacious. A 9.0-inch touchscreen, part of that







It's easy to confuse the Rogue's faux wood for real. It looks and feels close to what you find in luxury SUVs.

Premium pack, is compatible with wireless Apple CarPlay (Android Auto works only with a wired connection). Space-wise, the second row is fine, while the cargo area has capacity to handle all the supplies and gear for a family road trip.

Like the CR-V, the RAV4's cabin is a step behind those in the new Tucson and Rogue. Its 8.0-inch touchscreen is easy to use, but the software running on it—like the Honda's—feels old and slow to respond. And although we appreciate the 360-degree camera, it's harder to see in comparison to the Nissan's or Hyundai's

Toyota's interior designers sweated the small stuff. This TIE fighter–style pattern can be seen in the cupholders and dashboard trays.

due to its smaller screen. Additional stuff we'd fix: The rear doors could open wider to aid loading of cargo or small kids, and it's strange that the passenger seat lacks power adjustment in a \$40,000 vehicle. The HVAC knobs have a satisfyingly grippy texture, which is also found on the inside of the door handles. Unique details like this, as well as the fun, repeating star pattern on various surfaces, add some whimsy and keep this older interior from feeling dour.

Honda and Toyota have gone a step beyond other automakers in making their active safety technologies standard across the board. And that doesn't just include their popular SUVs; it applies to most of the new models in their lineups. Honda Sensing and Toyota Safety Sense work superbly on the road, keeping you centered in your lane while maintaining a safe distance from the car in front. The Honda Sensing system in particular is one of the best on the market.

Nissan and Hyundai haven't yet decided to bake such goodies into all their vehicles; a few active safety technologies are included on their base models, but the full-boat driver assistance systems are reserved for higher trims.

Nissan's ProPilot Assist with Navi-Link was part of the \$1,320 Premium package on our test vehicle, and it did a great job reading lane markings and detecting other vehicles around the Rogue. We would love to see ProPilot expand to other models and across the Rogue lineup, and we're sure Nissan customers would appreciate it, as well. Engaging it is easy, too: Simply press and hold the blue button on the steering wheel for a couple of seconds, and ProPilot wakes up.

We like the way Hyundai's systems work together, but like the CR-V and RAV4, you must turn on the lane keep assist and adaptive cruise control individually to get the full semi-automated experience. Hyundai's digital instrument cluster makes it easy to see what's engaged and what's not, but we prefer the simplicity of Nissan's on/off button mounted on the steering wheel.

Of these four SUVs, the Rogue and Tucson are the only ones classified as a Top Safety Pick+ from the Insurance Institute



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for Highway Safety (IIHS)—the highest achievement the organization hands out. The CR-V and RAV4 carry Top Safety

Pick ratings.

The Roman poet Ovid once said, "A horse never runs so fast as when he has other horses to catch up and outpace." The same goes for the state of the compact SUV segment. With so many vehicles in the race, everyone is constantly trying to constantly catch and pass the competition.

We laud Hyundai for taking a risk in doing something different with the new

Tucson. With daring exterior design and an upscale cabin, it certainly makes its mark, and it's packed with useful features and tech while delivering tremendous value. But Hyundai invested its money in things you can see and touch, not in the way the vehicle drives. And we care about driving.

We had high hopes for the latest Tucson, but by unanimous choice it landed in last place. It was without a doubt the boldest in the foursome, but it leans a bit too hard on style instead of delivering a solid all-around experience.

The Toyota RAV4's rugged styling and interior features make it very compelling and illustrate why it's the sales leader. It does everything well—great interior space, well-equipped cabin, fantastic safety technologies, and the list goes on. But there are mystifying misses, like the narrow rear door opening and not being able to fold the rear seats from the cargo area.

The RAV4 is the Swiss Army knife of SUVs, but being good in many areas couldn't push it past our top two finishers. We slotted it in third place.

The Nissan Rogue might just be the most improved SUV on the market. It's a handsome ride that brings space, value, safety, and technology under one roof. Nissan delivered in a big way. Plus, it drives well, too, something we don't say about every Nissan these days.

Indeed, among such fierce competition, there's no shame in finishing second. Make no mistake, our hats are off to Nissan for an incredible step forward. The Rogue's biggest problem is that the CR-V exists.



The Rogue's stubby shifter looks upscale and allows plenty of room in the center console.





As to our winner, the Honda CR-V, it has won every relevant *MotorTrend* comparison since the fifth-generation model came out, including SUV of the Year honors. This outing, however, was its closest call yet. The CR-V is aging, and although it continues to drive well, its technology and interior design need to be upgraded if it's to keep its lead.

Still, the Honda remains unmatched in terms of packaging and versatility, key factors in determining the pecking order in this four-vehicle showdown. So the CR-V remains the best small SUV you can buy—for now.



4TH PLACE: 2022 Hyundai Tucson PROS

- Attractive design
- Fantastic value
- Impressive technology

CONS

- Stiff ride
- Lazy powertrain

VERDICT Amazing design and technology are overshadowed by poor driving characteristics.

3RD PLACE: 2021 Toyota RAV4

- Great interior and exterior styling
- Amazing safety technologies
- Dynamic ride

CONS

- Narrow opening for rear doors
- Second-row seats can only be folded from the second row

VERDICT A highly versatile SUV that has everything you want under a nice roof, but it's missing some of the tools you wish you had packed.

2ND PLACE: 2021 Nissan Rogue PROS

- Handsome design
- Spacious cabin
- Modern technology

CONS

- Somewhat stiff ride quality
- Sparse standard equipment

VERDICT The most improved SUV. If Nissan continues down this path, it could get back on top of the game.

1ST PLACE: 2021 Honda CR-V PROS

- Excellent packaging
- Cavernous interior
- Great value

CONS

- Outdated technology and design
- Lacks today's fancy features

VERDICT The Honda CR-V is still the best SUV in the compact segment, even as heavy competition gets stronger. Its value, driving dynamics, and interior space continue to top the class.

POWERTRAIN/CHASSIS	WINNER 2021 Honda CR-V AWD Touring	2022 Hyundai Tucson Limited AWD	2021 Nissan Rogue SL AWD	2021 Toyota RAV4 Limited AWD
DRIVETRAIN LAYOUT	Front-engine, AWD	Front-engine, AWD	Front-engine, AWD	Front-engine, AWD
ENGINE TYPE	Turbocharged I-4, alum block/head	I-4, alum block/head	I-4, alum block/head	I-4, alum block/head
VALVETRAIN	DOHC, 4 valves/cyl	DOHC, 4 valves/cyl	DOHC, 4 valves/cyl	DOHC, 4 valves/cyl
DISPLACEMENT	91.4 cu in/1,498cc	152.4 cu in/2,497cc	151.8 cu in/2,488cc	151.8 cu in/2,487cc
COMPRESSION RATIO	10.3:1	13.0:1	12.0:1	13.0:1
POWER (SAE NET)	190 hp @ 5,600 rpm	187 hp @ 6,100 rpm	181 hp @ 6,000 rpm	203 hp @ 6,600 rpm
	179 lb-ft @ 2,000 rpm	178 lb-ft @ 4,000 rpm	181 lb-ft @ 3,600 rpm	184 lb-ft @ 5,000 rpm
TORQUE (SAE NET)	·	· · · · · · · · · · · · · · · · · · ·		
REDLINE	6,500 rpm	6,500 rpm	6,000 rpm	6,750 rpm
WEIGHT TO POWER	18.5 lb/hp	19.6 lb/hp	20.0 lb/hp	18.2 lb/hp
TRANSMISSION	Cont variable auto	8-speed automatic	Cont variable auto	8-speed automatic
AXLE/FINAL DRIVE RATIO	5.64:1/2.28:1	3.65:1/2.32:1	5.69:1/2.15:1	3.18:1/2.14:1
SUSPENSION, FRONT; REAR	Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar	Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar	Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar	Struts, coil springs, anti-roll bar; multilink, coil springs, anti-roll bar
STEERING RATIO	12.3:1	13.7:1	14.3:1	14.4:1
TURNS LOCK TO LOCK	2.3	2.4	2.5	2.6
BRAKES, F; R	11.1-in vented disc; 10.2-in disc	12.8-in vented disc; 12.0-in disc	11.7-in vented disc; 11.5-in vented disc	12.0-in vented disc; 11.1-in disc
WHEELS	7.5 x 19-in cast aluminum			
TIRES	235/55R19 101H Continental CrossContact LX Sport (M+S)	235/55R19 101V Michelin Primacy A/S (M+S)	235/55R19 101V Bridgestone Alenza Sport A/S (M+S)	235/55R19 101V Yokohama Avid GT (M+S)
DIMENSIONS				
WHEELBASE	104.7 in	108.5 in	106.5 in	105.9 in
TRACK, F/R	62.9/63.5 in	63.6/63.9 in	62.4/62.6 in	62.6/63.3 in
LENGTH X WIDTH X HEIGHT	182.1 x 73.0 x 66.5 in	182.3 x 73.4 x 65.6 in	183.0 x 72.4 x 66.5 in	180.9 x 73.0 x 66.9 in
GROUND CLEARANCE	8.2 in	8.3 in	8.2 in	8.6 in
APPROACH/DEPART ANGLE	18.9/23.1 deg	19.6/26.7 deg	19.0/23.6 deg	19.0/21.0 deg
TURNING CIRCLE	37.4 ft	38.6 ft	35.4 ft	37.4 ft
CURB WEIGHT	3,521 lb	3,670 lb	3,623 lb	3,689 lb
WEIGHT DIST, F/R	58/42%	58/42%	58/42%	58/42%
TOWING CAPACITY	1,500 lb	2,000 lb	1,350 lb	1,500 lb
SEATING CAPACITY	5	5	5	5
HEADROOM, F/R	38.0/39.1 in	38.3/39.5 in	39.2/37.8 in	37.7/39.5 in
		41.4/41.3 in	41.5/38.5 in	41.0/37.8 in
LEGROOM, F/R	41.3/40.4 in			
SHOULDER ROOM, F/R	57.9/55.6 in	57.6/56.0 in	57.1/55.9 in	57.8/56.4 in
CARGO VOLUME, BEH F/R	75.8/37.6 cu ft	74.8/38.7 cu ft	74.1/36.5 cu ft	69.8/37.5 cu ft
TEST DATA				
ACCELERATION TO MPH				
0-30	2.9 sec	3.1 sec	3.1 sec	2.9 sec
0-40	4.2	4.8	4.5	4.5
0-50	5.8	6.6	6.3	6.2
0-60	7.8	9.3	8.5	8.3
0-70	10.4	12.2	11.2	11.0
0-80	13.6	15.5	14.6	13.9
0-90	-	19.8	18.7	17.4
PASSING. 45-65 MPH	4.1	5.0	4.4	4.3
QUARTER MILE	16.1 sec @ 86.5 mph	17.0 sec @ 83.6 mph	16.6 sec @ 85.4 mph	16.4 sec @ 87.5 mph
BRAKING, 60-0 MPH	119 ft	118 ft	116 ft	120 ft
LATERAL ACCELERATION	0.83 g (avg)	0.82 g (avg)	0.82 g (avg)	0.81 g (avg)
	0 1 0			
MT FIGURE EIGHT	27.3 sec @ 0.62 g (avg)	27.4 sec @ 0.61 g (avg)	28.3 sec @ 0.58 g (avg)	27.6 sec @ 0.60 g (avg)
TOP-GEAR REVS @ 60 MPH CONSUMER INFO	1,700 rpm	2,000 rpm	1,600 rpm	1,800 rpm
BASE PRICE	\$36,325	\$37,385	\$34,750	\$37,555
PRICE AS TESTED	\$36,325	\$37,580	\$36,805	\$40,451
AIRBAGS	6: Dual front, front side, f/r curtain	6: Dual front, front side, f/r curtain	9: Dual front, front center, f/r curtain, f/r side	8: Dual front, front side, f/r curtain, driver knee, front passenger thigh
BASIC WARRANTY	3 years/36,000 miles	5 years/60,000 miles	3 years/36,000 miles	3 years/36,000 miles
POWERTRAIN WARRANTY	5 years/60,000 miles	10 years/100,000 miles	5 years/60,000 miles	5 years/60,000 miles
ROADSIDE ASSISTANCE	3 years/36,000 miles	5 years/unlimited miles	3 years/36,000 miles	2 years/unlimited miles
FUEL CAPACITY	14.0 gal	14.3 gal	14.5 gal	14.5 gal
EPA CITY/HWY/COMB ECON	27/32/29 mpg	24/29/26 mpg	25/32/28 mpg	25/33/28 mpg
	Unleaded regular	Unleaded regular	Unleaded regular	
RECOMMENDED FUEL		<u>_</u>		Unleaded regular
ON SALE	Now	Now	Now	Now



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ROAD DRIVE | 2021 Ferrari SF90 Stradale Assetto Fiorano

hen I first learned Ferrari was offering a plug-in hybrid supercar with hypercar aspirations, I didn't think much of it. In some ways the SF90 Stradale is yet another update of the F8 Tributo platform, which dates to the decade-plus-old 458 Italia—and truthfully there's some circa-2004 F430 marrow and sinew found within the new car's anatomy. I assumed it would be nothing more than a heavier iteration of the same Maranello-flavored, mid-engine V-8 supercar with too much power for anybody's good. Boy, was I wrong.

There's a comprehensively reworked version of Ferrari's twin-turbo V-8 behind the passenger compartment. Displacement is up from 3.9 to 4.0 liters, and power rises from 711 to 769 horsepower, along with 590 lb-ft of torque. This engine is mounted remarkably low to the pavement: The tops of the rear tires sit

above the cylinder heads. This is possible because Ferrari reduced the engine's overall height by 12 percent, and because there's a new eight-speed dual-clutch transmission mounted 15mm lower than the F8's seven-speed. Also, there's no reverse gear, so the smaller, more compact gearbox weighs less.

Between the engine and the gearbox lies a compact "pizza motor" (what non-Italians might call a "pancake motor") good for 157 hp and 196 lb-ft. There are two other motors, one driving each front wheel and making 97 hp and 62 lb-ft apiece. The latter two handle reverse duty, and although they don't make a ton of power, these units are stout enough to propel the SF90 to speeds up to 85 mph in pure electric front-wheel-drive mode, Ferrari says. However, I couldn't keep the V-8 turned off beyond 77 mph. Still, that's good. There's a battery you plug in to charge, mounted low behind



the two seats, and it provides 15 miles of pure-EV driving. Below 130 mph, the engine and three motors power the SF90; above that, the front motors disengage. This means, depending on what you're up to, the SF90 Stradale can be front-, rear-, or all-wheel drive. That's nuts.

Four driving modes are selectable via capacitive buttons found on the lower left of the steering wheel. They are eD (Electric Drive), Hybrid, Performance, and Qualifying. eD is self-explanatory—it prevents the V-8 from firing unless you run out of juice or exceed the 85-mph limit. Hybrid means the SF90 defaults



to EV mode, but the gas engine starts when more performance is requested or if the battery is drained and needs to be charged. Performance mode keeps the V-8 burbling and the battery charged, and it's probably how most drivers will enjoy their SF90s. Qualifying taps everything for maximum power, allowing for full output from the electric motors. This is the quickest, most powerful driving mode, where draining the battery is part of the fun.

A typical use case scenario: You silently roll out of your gated driveway/hangar and make the trip to your favorite canyon road, which is let's say 8 miles away. The battery shows 7 miles of range left. You pop the SF90 into Performance mode to warm everything up, and hey, look at that—after a few miles of hard driving, the battery's range has gone back to full. The gas engine spins the three electric motors while also keeping the battery juiced. Into Qualifying mode you go, driving especially hard for a few miles. The battery is drained.

Once you tire of limit-handling shenanigans, you drop back into Performance mode to cool things down. By the time you're at the bottom of the mountain, the battery is nearly fully charged, and you drive home in electric mode, making it back to your villa with 5 miles

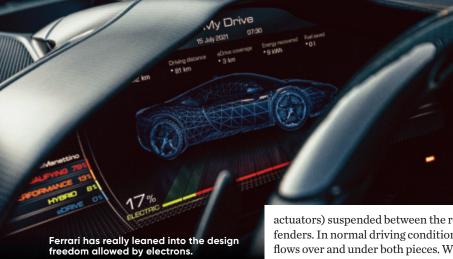


of range left. The above isn't marketing baloney: I spent six hours driving the SF90 all over Los Angeles, and it's exactly what I experienced.

I need to mention I did not drive the standard SF90 Stradale; I drove the even sportier and track-focused Assetto Fiorano version. Hand Ferrari an additional \$56,000, and you get a significantly upgraded car. The standard adjustable dampers are replaced by fixed Multimatic shocks. Steel becomes titanium for the springs and exhaust system. The underbody and door panels are fully carbon fiber. This all results in a 66-pound weight reduction. Ferrari claims the SF90 weighs 3,454 pounds, which would put Assetto Fiorano models at less than 3,400 pounds. Emphasis on the word "claims." That's the dry weight; it's more like 3,839 in the real world (more on this on the next page).

The carbon-fiber rear spoiler and other clever aerodynamic tricks deliver 859 pounds of downforce at 155 mph. Lastly, the standard tires are replaced with Michelin Pilot Sport Cup 2s designed for the Assetto Fiorano. These meats are a bit softer of compound to partially compensate for the Assetto's stiffer ride.





Ferrari says roughly 50 percent of SF90 customers have ordered the Assetto Fiorano specification. One caveat: You cannot spec a front-end lift system on the Assetto Fiorano, which will no doubt turn off some buyers. However, the car rides much taller than others of its ilk; I only scraped the lip once.

As for the design, the SF90 looks like it was born in a wind tunnel rather than on someone's sketchpad. In fact, there are 14 paragraphs in the press release related to aerodynamics, which is what happens when a Formula 1 manufacturer builds a modern hypercar. What are those 14 paragraphs about? Turns out, a lot. Some highlights include the struggle between downforce and aero efficiency. Anything this powerful needs to stick to the ground, but EVs and PHEVs must be slippery. Additionally, the engine, the three electric motors, the battery, the brakes, the fluids—even the passengers—need to be kept cool. Air needs to be manipulated in ingenious ways.

Additionally, sometimes you want 859 pounds of downforce, and sometimes you don't. This means you can stall both the front and rear wings. The rear section is particularly tricky. The wing is in two sections (one fixed, one on electric

actuators) suspended between the rear fenders. In normal driving conditions, air flows over and under both pieces. When downforce is needed, the lower section (a.k.a. the shut-off Gurney flap) drops down to close off the flow underneath and create a totally new tail geometry.

One of the more surprising parts of driving the SF90 is how long it stays in pure electric mode. True, there's only 15 miles of EV range, though the car can charge itself quickly and easily by burning gas. What I'm talking about, rather, is how long you can drive in a manner that resembles aggressive driving with the gas engine switched off. Most performance PHEVs snap the engine to life if you move the accelerator pedal more than a few degrees. Not here. It even remains in eD going uphill. When the SF90 Stradale is in eD mode, it's a front-drive mid-engine supercar.

The ride is surprisingly good, though the Assetto Fiorano package means there's no bumpy road mode. The Multimatic dampers are reasonably compliant; likewise, the stiffer titanium springs don't feel all that stiff. The SF90 is no Rolls-Royce, but it's remarkably civil, living up to the Stradale ("road") moniker in both name and function. Furthermore, it's amazing how quiet the cabin is and the low volume needed to talk to the person sitting next to you. You'll be in Hybrid mode most of the

FORMULA FIORANO: THE QUICKEST HYBRID AND QUICKEST GAS-DRINKING CAR WE'VE EVER TESTED

he Formula Rossa at Ferrari World
Abu Dhabi is the world's fastest roller
coaster, with a top speed of 149.1 mph.
That's just 4 mph more than the SF90
Stradale Assetto Fiorano reaches at the end
of the quarter mile. The car, however, doesn't
stop pulling until it hits 211 mph. Yes, we
strapped our test equipment to the plug-in
hypercar.

Our test occurred during the company's Corse Clienti rich-person racing program's Ferrari Racing Days at Indianapolis Motor Speedway, where we were invited and encouraged to document the performance of Ferrari's quickest-ever road car.

ACCELERATION

The Assetto Fiorano hits 60 mph from a standing start in 2.10 seconds. It runs a standing quarter mile in 9.6 seconds at 145.2 mph. This makes it the quickest hybrid and the quickest gasoline-burning car we've ever tested, taking those honorifics from the

LaFerrari. On our all-time list, only the more powerful all-electric Tesla Model S Plaid beats the Ferrari.



To make a car this powerful and this quick so easy to drive on a racetrack you've never been to is rare, but Ferrari pulled it off.



As we reported in our October issue, on an unprepped surface (as we tested the Ferrari on) the Tesla hits 60 mph in 2.07 seconds, just 0.03 of a tick quicker. That Tesla is also quicker through the quarter mile, needing 9.3 seconds and trapping at 152.2 mph.

But the Ferrari doesn't need 15 minutes of battery and vehicle prep to blow your mind. You simply switch to manual shifting, put it in gear, engage Performance Start (launch control), step on the brake, and floor the gas. When the revs stabilize around 3,400 rpm, release the brake and hang on.

It's also dead-nuts consistent. Every launch feels the same, and every 1–2 shift chirps the rear tires. We always perform multiple runs to ensure we achieve the best possible number, and here it was a matter of fractions of a second. Nearly every run was within 0.2 second to 60, the two quickest runs separated by only 0.01 second.

STOPPING POWER

Ferrari's first-ever brake-by-wire system flaunts massive carbon-ceramic discs, huge calipers, and the regenerative capability of the front motors to whoa the car to a stop. They do so with incredible force and—here's that trait again—consistency. Stopping from 60 mph requires just 90 feet, among the best we've ever recorded, the shortest being 87 feet set by the considerably lighter Porsche 911 GT2 RS Weissach Edition.

It's an especially impressive number considering the SF90, even in its lightweight Assetto Fiorano track setup with carbonfiber wheels, titanium suspension springs, and more, weighs 3,839 pounds according to Ferrari's own racing scales.

We've dinged both the 488 and F8 in the past for dull brake pedal feel and the amount of leg strength needed to get maximum braking performance. So we were skeptical even before factoring in the SF90's brake-bywire system, a technology we've found across manufacturers to be all over the place in terms of feel and response. But Ferrari nailed it. The SF90's pedal feels better than the purely mechanical ones in any of the company's recent models, and its artificially generated force feedback is deceptively natural. It requires less effort to get maximum braking, even at 150 mph, and there's a far greater range of adjustability in pedal travel.

ON THE TRACK

This is clutch on the racetrack, where Ferrari turned us loose on Indy's infield road course, a slightly shorter version of the configuration run by Formula 1 from 2000 to 2007. The SF90 eclipses 150 mph on both the front and back straights, each of which is followed by a 90-degree corner, requiring massive deceleration twice a lap. We assumed the street-legal tires and brake pads would require us to back up our braking points after a few laps as things began to overheat, but seven laps later, we could still wait until the last second to stand on the stoppers.

Despite up to 133 horsepower going to each front tire as the twin electric motors vector torque across the front axle, the SF90 still has delicate and communicative steering, especially for an all-wheel-drive car. The front torque vectoring, combined with the electronically controlled rear differential, allows you to get back on the power harder and sooner than many supercars and lets the

Ferrari SF90 | TRACK TEST

front wheels pull the car out of the corner. Go too hard and you can induce a mild power-on understeer, which is easily countered by lifting slightly. Lift-throttle oversteer can also be induced by trying to carry too much speed into a corner, but the rotation is moderate at worst and easily caught and controlled. This isn't a snappy car or one that fights you coming back into line; it's remarkably balanced and composed.

That's what makes the SF90 special: It's incredibly easy to drive fast, and it works with you, not against you. Despite blending power from three motors and an engine, the throttle pedal has plenty of travel and a linear gain that makes for easy and precise adjustments. The power does surge at full throttle when the total combined might of the electric motors and turbochargers kicks in, but by the time you get to that point, you've already taken most of the steering out of the car, and the power doesn't upset it. This truly is a nearly 1,000-horsepower machine you can jump into and drive for the first time, on a track you've never been to, and be completely confident in exploring your lines and braking points immediately. There's no getting used to the SF90's behavior-it just works, letting you focus on your driving, not managing the car.

You may have perused the specs already (page 67) and noted the SF90 only pulled 1.07 g in our skidpad test, which is considerably lower than many other supercars we've tested. However, we believe this can be chalked up to the test surface, as the only parking lot we were able to test in was bumpy and had inconsistent pavement quality.

AN ALL-TIME GREAT

Roller coaster fanatics aren't unlike car fanatics. They pore over spec charts, ranking and comparing rides around the world based on their acceleration, top speed, g forces, and more. According to an analysis by Ohio University, a roller coaster typically costs between \$3 million and \$30 million, not including the land beneath it. By that measure, the SF90 Stradale Assetto Fiorano's \$704,929 as-tested price is a screaming deal.

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time, where the gas engine is mostly off. When running around as a front-drive EV, the SF90 sounds like a magical spaceship.

When the engine fires up, the reworked 4.0-liter V-8 is sonically thrilling. True, it lacks the bass notes you get from an AMG twin-turbo V-8, the snarl of Aston Martin's version of AMG's V-8, or the sizzle of Lamborghini's naturally aspirated V-10. But the SF90's gas-fueled powerplant has a sweet bravado, a midrange punchiness better than whatever McLaren's cooking with its 4.0-liter twin-turbo V-8. Not only is the Ferrari engine a treat to the ears, but the luscious sound of gasoline being immolated also obscures the EV noises.

Ferrari's been rather clever here. Once the V-8 bellows to life, you never know you're driving a plug-in hybrid. Especially in Qualifying mode, pushing the throttle doesn't give you any hint of batterypowered anything. The experience is nothing but good old Italian roar, with double the horsepower you're used to.

Yes, 986 hp is bananas. Particularly when you say the number out loud. From behind the wheel, however, the power just plain rocks. The acceleration is predictably brain-melting. Forget 0 to 60 mph (which we measured at 2.1 seconds) and instead think about how in 7.0 seconds you're traveling 125 mph. That's bonkers, a tick quicker than a McLaren Senna



and on par with the old 987-hp Bugatti Veyron 16.4. Did it feel that quick? Yes, it most certainly did. However, the SF90 felt impossibly controlled, too. In cars like the Senna and the equally quick McLaren 765LT or Porsche 918 Spyder, a sense of terror arises as you get near redline in third gear: The acceleration pace increases as your knuckles whiten. Only modern Bugattis, both Veyrons and Chirons, and now the SF90 Stradale, can do the freaky-quick acceleration trick calmly, without that bat-out-of-hellness.

The brakes are incredible, too. The SF90 Stradale features Ferrari's first-ever brake-by-wire system, and not only are the massive (15.7-inch front, 14.2-inch rear) big-boy-pants carbon-ceramic rotors incredibly effective, they're also the best I've ever experienced on any Ferrari despite the integration of electric regeneration. And just a smidge of pedal travel perfectly reweights the nose, allowing you to get back on the throttle that much quicker. Never in a million years would you think the brakes are by-wire or linked to a battery in any way—it's simply brilliant execution.

As leveled up as both the powertrain and the brakes are, the SF90 Assetto Fiorano's handling impressed me the most. It's nearly impossible to tell two electric motors power the front wheels in the corners. And the SF90's steering is as good as a McLaren's. There's a reason this is surprising: McLaren's finest all have hydraulic-assist steering, and your typical model is 100 to 200 pounds lighter than Ferrari's comparable competitors. Example: On our scales, a 711-hp Ferrari F8 Tributo weighed 3,398 pounds, whereas the 711-hp McLaren 720S clocked in at 3,167. Say what you will about McLarens in any other regard; in my experience, their steering feel is superior to their prancing-equestrian counterpart's. Save for the SF90, which has truly and almost unbelievably phenomenal steering feel, even with its significant additional weight.

Ferrari's 812 Superfast is a howling madman—rigid, unruly, and decidedly not a GT in the classic sense of the term. The F8 is a lightning-quick handful, by some metrics the opposite of what a

driver's car should be. Then, seemingly out of nowhere came the lovely, back-to-basics little Roma. It has sophistication and maturity absent from Ferrari's other offerings; it's the Maranello supercar masquerading as a GT that's stolen my heart. The SF90 Stradale flows from this branch of Ferrari's genetic code. This nearly 1,000-hp, AWD, four-motored hypercar is actually damned elegant. Daily driver? The frunk's a little small, but yes, you can. More important, yes, oh lordy 110 percent yes, you'd want to.

Now comes the weird part. Ferrari pitches the SF90 as the LaFerrari's successor, which is a big claim. Among the cognoscenti, certain Ferraris are holy objects. Supercar enthusiasts see a direct lineage from the 288 GTO to the F40, the F50, the Enzo, and, finally, the LaFerrari. All five of those incredible cars were limited editions, though some (Ferrari only built 273 288 GTOs) are rarer than others (there are approximately 1,200 F40s). But the SF90 is a regular production car; Ferrari will build and sell as many of the \$511,250 things as it can. Remember, kids, that's the base price. As tested? Right around \$705,000.

Is the SF90 special enough to join the pantheon of unquestionably select Fezzas? In terms of performance, this occasionally front-drive plug-in hybrid beats all of them. The SF90 is 0.7 second quicker around Ferrari's Fiorano test track than the LaFerrari and more than 3.0 seconds better than an Enzo. Will it be quicker than the upcoming 812 Competizione? Seeing as how the 812 Superfast is already 2.5 seconds off the Stradale's pace, I'll guess 29 extra hp and a skosh more aero ain't gonna cut it.

The SF90 is and will remain, for the time being, the quickest-lapping roadgoing Ferrari ever. And keep in mind, 1 minute, 19.00 seconds around Fiorano is the time for the regular car, not the Assetto Fiorano, which is no doubt quicker. Do Ferrari purists value outright performance, cutting-edge technology, and refined manners over the traditional notion of a rare wild horse that needs a good breaking-in? Regardless, as for the SF90 Stradale itself, I remained stunned. It's near magic. ■



2021 Ferrari SF90 Stradale Assetto Fiorano

BASE PRICE	\$511,250	
PRICE AS TESTED	\$704,929	
VEHICLE LAYOUT	Mid-engine 3-motor FWD/AWD/RWD, 2-pass 2-door coupe	
ENGINE	4.0L/769-hp/590-lb-ft tw turbo DOHC 32-valve V-8 plus 2x 133-hp (front) and 201-hp (rear) elec motors; 986 hp (comb)	
TRANSMISSION	8-speed twin-clutch auto	
CURB WEIGHT (F/R DIST)	3,839 lb (44/56%)	
WHEELBASE	104.3 in	
LXWXH	185.4 x 77.6 x 46.7 in	
0-60 MPH	2.1 sec	
QUARTER MILE	9.6 sec @ 145.2 mph	
0-100-0	7.9 sec	
BRAKING, 60-0 MPH	90 ft	
LATERAL ACCELERATION	1.07 g (avg)	
EPA CITY/HWY/ Comb fuel econ	16/20/18 mpg; 51/51/51 mpg-e*	
ON SALE	Now	
*EPA blended-PHEV (charae-depletina) mode		



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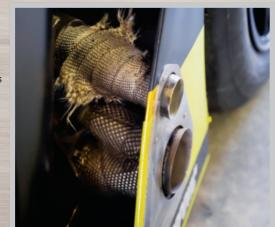
Bentley Bentayga driven by Rhys Millen set the production SUV record during the 2018 Pikes Peak International Hill Climb. In 2019, the same team set the production car record with a Bentley Continental GT. Pandemic restrictions in 2020 limited travel to the U.S. and to the hill climb, but Bentley and Millen were back this year with a wildly modified version of the company's GT3 race car: the Continental GT3 Pikes Peak.

The aim was to win the Time Attack 1 class, smashing the existing record. Three Pikes Peak events, three wins, three records. Call it an inevitable hat trick, one that would cap Bentley's final official entry at Pikes Peak. That was the plan, anyway, for June 27, 2021. Can you hear god laughing?

Calling Pikes Peak a "challenging test" is like calling a redwood a "big tree." The runs begin at 9,395 feet above sea level and then climb all the way to 14,115 feet. There are more than 150 corners in less than 12.5 miles. It's an extreme, grueling gut check of a course. Never mind the treachery of the road itself or the capricious weather inherent to such a massive Colorado mountain; the thin air (about 60 percent as dense as at sea level) causes the bulk of any technical issues. As a car climbs to those heights, the effectiveness of its aerodynamics, power, and cooling (both brakes and engines, or batteries in electric cars) all decrease. You get one shot at a run. Caveats made, Bentley appeared to have brought the right tool for the job.

The Continental GT3 Pikes Peak is a monster. Bentley starts with its

Continental GT3 road racing car and goes insane from there. Bentley motorsports director and its former powertrain chief Paul Williams tells us the 4.0-liter twinturbo V-8 makes 750 horsepower at the mountain's summit. So how much at the starting line? Neither Williams nor anyone else at Bentley would give a straight







answer, for reasons known only to them. "A number between 750 and 1,000 hp" is the best, though still annoying, answer we got. Why so cagey? Perhaps it has something to do with the fact the car runs on Porsche's new renewable eFuel. So let's go with the idea the GT3 Pikes Peak makes 1,000 hp at 9,395 feet. The thing is, since there's 60 percent O2 density at 14,000 feet, the turbos spin fast enough to maintain 32 psi of pressure—which means power output is nearly double the 1,000-hp figure at sea level. And did we mention the carbon-fiber-intensive construction means the car weighs only 2,970 pounds?

The engine is based on the stock Continental GT's V-8, but the turbos are located out of the vee, necessitating new exhaust manifolds. In addition to the direct fuel injectors, a second set of port injectors is added primarily to assist with detonation cooling. Stronger pistons and connecting rods fire away beneath a rather attractive carbon-fiber intake manifold. A second rear-mounted radiator sits in the GT3's trunk, and hot air escapes out of large holes in the "boot lid." The exhaust, made from Inconel, is fully custom. The car's aero is close to mental and produces 30 percent more downforce than the standard race car, with most of its gains made in front. The suspension boasts negative camber for low-speed corners

(Pikes Peak, especially toward the top, is littered with them), and water-cooled brakes round out Millen's ride.

There's ice up on the mountain when the big day arrives. Race officials attack it with, logically, flamethrowers. Makes sense. However, by the time our contingent gets to the pits, the course's fourth and top sector is canceled. This means the route's distance drops from 12-plus miles to 8. Even if Bentley wins the class, the victory will carry an asterisk. The team is not pleased.

Pikes Peak record holder Romain Dumas and his Champion Motorsports Porsche GT2 RS Clubsport are the bogey Bentley needs to best in Time Attack 1. Dumas runs before Millen and posts a quick time of 6:31.914 at an average speed of 85.335 mph, putting it in second place overall behind an open-wheel car in the Unlimited Class. (The latter, a Wolf GB08 TSC-LT driven by 2019 winner Robin Shute, will claim the overall victory with a time of 5:55.246.)

Millen and the Conti GT3 Pikes Peak get off to a fantastic start, punctuated by the car's outrageous noise as it takes the green flag. Our attention turns to some computer monitors, where the Bentley's Sector 1 time soon appears: 1:32.627, appreciably quicker than Dumas' 1:38.261. Millen's Sector 2 time follows, 2:08.694 versus Dumas' 2:14.961. And the upcoming final sector was the Bentley's best one during practice.

But the time for the final split doesn't show on the screen when it should, and something obviously isn't right. When the result finally does appear, Millen's Sector 3 run is 2:54.960 for a total time of 6:36.281 and an average speed of 84.995 mph. It means a second-place finish in Time Attack 1, and fourth overall.

Aside from ice shutting down Sector 4, the air toward the summit was much denser than normal—one local says it's the densest recorded in the hill climb's

A study in frustration, Pikes Peak's 12 miles are an endurance race in miniature. **Especially** when ice on top of the mountain reduces the length to just





the GT3 Pikes Peak starts in first gear but with its clutch open. To close it, you press and hold the left turn signal button on the Fanatec steering wheel while you push the throttle with your right foot. Once the car is in motion, you switch off the turn indicator and, as you roll down pit lane, hit the red "Pit" button to deactivate the pit speed limiter.

Give it a good belt of throttle, and you feel the tremendous power, and the grip level is something few people have ever experienced in a car. The GT3 greedily scoots around the first turn and onto the back straight. At the bottom of my vision I see a couple of green lights appear on the steering wheel. Pull the right paddle, and the sequential transmission slams home third gear. Foot in it, the greens appear again as the gearbox snaps off a shift to fourth. It's time to turn off the track's oval portion and onto the infield road course. Go to the brakes, and you immediately realize you should've waited another quarter mile before decelerating. This is no exaggeration, as these water-cooled, milled billet calipers clamp down on

carbon-ceramic rotors in a fashion that's far better than anything I've ever experienced with any type of street car.

Perhaps the worst cliché in automotive journalism is to say a car corners like it's on rails. Well, the Pikes Peak corners like a snake in a drainpipe. I take the initial turn about 80 percent slower than I could have. There's grip, grip, and tons more grip. Being it's my first lap around PPIR, I get confused and take the immediate right, not the correct right-hander a football field further down. This means I've shortened one of my five laps. Not the best start.

I'm overly gentle with the car through the rest of the infield course before I pop back onto the oval just before the front straight. The start/finish line is in sight, so I jump on the go pedal, though not all the way. The Conti is in fourth gear by the time it crosses the line, and I feel more confident, but I'm still babying the dang thing. Only four laps remain, so it's time to go harder.

Working around to the infield section again, I try not to shift until I see the yellow lights on the wheel light up. Brake in a spot that feels dangerously late, and again you're struck by this GT3's ability to go way deeper still. Apply much more throttle than the last time through, and the sheer mechanical grip leaves you dumbstruck. The combination of all-wheel drive, slick racing rubber, and meaningful downforce glues the front axle to the tarmac. Another mental note: Next time go harder still.

Showing zero concern for the massive front splitter, aim for the rumble strips. The relatively soft suspension eats up bumps in shocking fashion, and the

Richard Petty and Derek Bell once saw me in my underwear as I changed into a firesuit. Following Millen? Much more humbling.





Glue, gum, sap, tar—pick your metaphor for sticky. It's hard to tell where the mechanical grip ends and the aero begins.







WHEEL IT YOURSELF, VIRTUALLY

e were incredibly fortunate to experience the Continental GT3 Pikes Peak firsthand, but you can get a feel for its main driver interface by bringing home its actual steering wheel and attaching it to your sim racing setup. And by "actual," we mean an exact copy, not a poseur replica, of the wheel Rhys Millen used during this year's Pikes Peak International Hill Climb. The one you'll be able to buy is fully functional in the real race car as well as on your gaming setup.

Bentley partnered with leading sim racing hardware supplier Fanatec to design the FIA-compliant helm, and it's a tasty bit of equipment. The 310mm wheel features a magnesium core, a 5mm-thick carbonfiber front plate with Bentley green woven into it, a 3.4-inch circular digital display, LED shift lights, Alcantara hand grips, and CNC-machined aluminum rotary switches with Bentley's signature knurling. Additionally, it comes with four magnetic paddles for shifting and other functions, two analog clutch paddles, and enough programmable buttons, switches, and encoders to always keep your virtual race car's settings dialed in. An FIA QR2 quick release makes attaching and removing the steering wheel from a

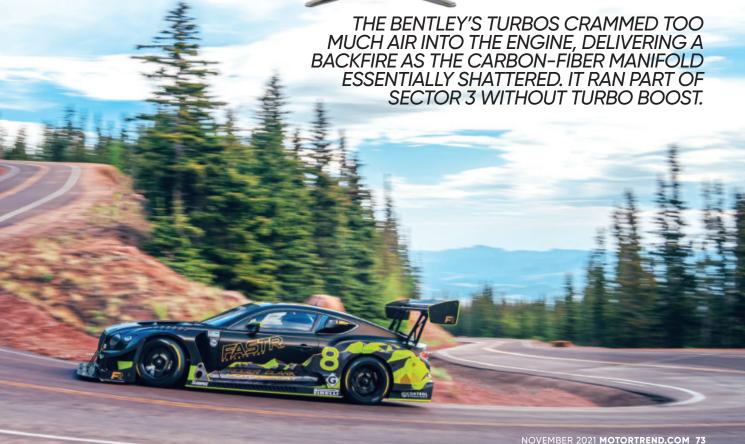




Fanatec wheelbase (and the real race car) the work of just a few seconds.

Officially dubbed the Podium Steering Wheel Bentley GT3, it's even useful if you're not into sim racing but are a devoted motor-sports enthusiast who appreciates owning a piece of genuine memorabilia: It includes a mount to display the wheel on a desk or wall, plus a clock function.

Fanatec and Bentley have not confirmed when the wheel goes on sale, how many units will be produced, or pricing. For up-to-date information regarding availability, visit bentley.fanatec.com. Mac Morrison







endless grip and 738 lb-ft of torque mean the race car simply leaps off the corners. It's a rocket sled, man.

This time on the front straight, the GT3 reaches fifth gear traveling at more than 150 mph about a foot from a concrete wall. Oh, and this Continental is righthand drive, so the wall is even closer. The

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engine wails away before braking and downshifting for the first turn. There's a nasty-sounding crack as the dual fires from the headers get hit by two afterburner blasts from the blowoff valves. It's a little surprising just how easy this mountain-crushing machine is to drive, but mostly I concentrate on pushing it harder and harder.

On lap four, I fling the multimillion-dollar thing around the same way I would any other car. It's nowhere near its limits, but it still makes you feel like an absolute hero driver. It also makes you wish for another 25 laps. I shake my left fist in celebration between downshifts to begin the cooldown lap. What fun that was!

Note to the Bentley crew: You must come back to Pikes Peak and try again. A car this good deserves the full mountain



course, deserves the win. Through a smile, motorsports boss Williams reminds me that Bentley CEO Adrian Hallmark was responsible for returning the marque to Le Mans in 2003. Reading between the lines, you can bet a Breitling that Bentley, this car, and Millen are all back on the mountain next year.



Ford gave Jonny a Bronco to drive to Pikes Peak International Raceway.

Shortly thereafter, we got our hands on one in L.A. for a test (see page 26).



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"heads turn"



When you get down to it, it's not what the manufacturer says about his product that counts, but what the customer says. And folks who tried this wax had a lot to say. "Absolutely amazing", "effortless", "best wax ever" and yes, "heads turn" are some actual customer descriptions. So, to all of you who have fallen in love with this amazing wax, we thank you heartily. To those of you who have not tried it, we hope you'll join the party and see what all the fuss is about. Learn more at p21s.com.

Updates on our long-term fleet

TGARAGE



ARRIVAL: 2021 Kia Sorento



EPA City/Hwy/Comb Fuel Econ 21/28/24 mpg

"We're about to find out whether this in-betweener has its own distinctive appeal." Alex Leanse

Base Price \$40,965 As Tested \$42,190

an't blame you if the Sorento hasn't crossed your mind recently. It doesn't help that Kia's made forgetting it easy. The smaller Sportage, though old, looks cooler. Then the larger Telluride went and won MotorTrend's 2020 SUV of the Year competition. Where's the Sorento been? Stuck in the middle. We drove the third-generation model only twice since its 2016 launch-so it hasn't much crossed our minds, either.

Bam! Enter the fourth-gen Sorento, fully redesigned for 2021. If we didn't spend much time thinking about the model before, we don't have that option now—we just got one for a yearlong test.

The new Sorento etched itself into our memories even

before we knew it was joining our long-term fleet. If the outgoing model looked puffy and anonymous, the new one is anything but. Between its angular LED headlights and split taillights, the chiseled, edgy body is packed with details. For the first time, a Sorento is an SUV we actually want to be seen in.

That's especially true of this particular Sorento. It's painted a color called Crystal Beige, a gorgeous hue with a terrible name that several folks have noted sounds like a washed-up adult performer. Among MTers it has gained the nickname "Sorentoro Elios" in tribute to Oro Elios, a lovely Lamborghini paint with a similar golden tint. Whatever it's called, it's eye-catching without being excessive,

highlighting the body's design while contrasting against our car's blacked-out window trim and wheels.

Those 20-inch rollers are standard on our Sorento SX, which has a 2.5-liter turbocharged I-4 making 281 hp and 311 lb-ft of torque. It's joined to an eight-speed dual-clutch automatic transmission, and we opted for all-wheel drive (an \$1,800 upgrade). In our previous experience, this powertrain didn't leave a great impression. Quickness isn't the issue; 60 mph arrives in 6.4 seconds. Rather, the transmission's low-speed behavior makes pulling away smoothly or maneuvering into parking spaces annoying. We'll be eager to see if this

behavior improves over time, or if we learn to coax the dualclutch into cooperation with experience.

The Sorento is all about its seats and how it fits up to seven people into a footprint smaller than most three-row SUVs. (The Sorento we'll spend a year with is configured with second-row captain's chairs for a six-seat layout.) The fronts are heated but not ventilated, and the passenger's is power adjustable. All trims have leather on the steering wheel and shifter; our car's seats are leatherette. A humongous moonroof adds airy ambiance, which helps given the three-row's somewhat compressed positioning.

The 10.3-inch infotainment touchscreen is larger than the basic 8.0-inch unit, but the SX trim has a 4.2-inch cluster information display and analog dials instead of the 12.3-inch fully digital cluster found on the high-end Prestige trim. Every Sorento has USB charge ports in each



SPECS VEHICLE LAYOUT Front-engine, AWD, 6-pass, 4-door SUV ENGINE 2.5L/281-hp/311-lb-ft turbo port- and direct-injected DOHC 16-valve I-4 TRANSMISSION 8-speed twin-clutch auto CURB WEIGHT (F/R DIST) 4,084 lb (57/43%) 0-60 MPH 6.4 sec QUARTER MILE 14.8 sec @ 96.5 mph BRAKING, 60-0 MPH 117 ft LATERAL ACCELERATION 0.84 g (avg)





HYUNDAI SONATA



KIA SORENTO

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2021 Toyota Mirai



Service Life: 1 mo/1,596 mi Average Fuel Econ: 65.0 mpg-e

"After a month with the Mirai, it has turned me into an EV snob." Aaron Gold

Unresolved Problems None Maintenance Cost \$0 Normal Wear \$0 Base Price \$50,495 As Tested \$52,330 EPA City/Hwy/Comb Fuel Econ 76/71/74 mpg-e

ve already put 2,000 miles on the hydrogen-powered Toyota Mirai, and I'm reluctant to admit how much I enjoy the car. I'm a small-sporty-stick-shift kind of guy, but I've fallen for a big, cushy, two-pedal Toyota. What the hell is happening to me?

What's happening is that I'm becoming an EV snob. Once you get used to the smooth, silent flow of electric power, the vibration and gear-changing of a gasoline powertrain starts to feel downright uncivilized. Although the fuel-cell-powered Mirai isn't as swift as its closest battery-powered EV competitors, Toyota appointed this car with Lexus-like levels of comfort and refinement, and I've come to the realization the laid-back life in the Mirai suits me just fine.

Fueling has been the biggest pain point, but it's not as painful as I expected. So far I've come nowhere near the promised 402-mile range-350 or so is the best I've seen-and I don't know if that's the fault of the car or the pumps. Finding hydrogen stations isn't a problem; there are plenty along the routes I ply, and I rarely need to go far out of my way. The in-car fuel-finder shows the closest stations and whether they are operational, but Toyota's own smartphone app shows fuel inventory, as well, and it's the tool I use the most.

The bigger problem is pump or card-reader malfunctions. Many of the stations are new, and there are teething problems. Filling up only takes about five minutes, but if there are two FCEVs ahead and only one working pump, that's a 15-minute wait.

The next step is to start traveling. I've already visited Tehachapi, 180 miles round trip from my home in Los Angeles with no stations en route, and I plan to stretch my tether to San Luis Obispo (175 miles), and eventually San Francisco, 350 miles with only one fuel station on the way (plus a second off the direct route). If that goes well, I'll try venturing outside the "hydrogen triangle" that links Los Angeles, San Fran, and Sacramento. Life as an early(ish) adopter has its pitfalls, but the Toyota Mirai is proving to be a comfortable cocoon from which to make my observations.





row; there are eight total and a wireless device charger in this one. Kia's Highway Driving Assist (HDA) suite bundles driver assist tech like adaptive cruise control, lane keep assist, and blind-spot monitoring. So far, HDA is living up to its name, inspiring confidence in the 1,000 miles we've covered.

At the top of the Sorento range is the X-Line trim, which Kia positions as the off-road-ish Sorento. That seems like more hype than hardware; its faux-skidplateequipped bumpers improve approach and departure angles by about 1.5 degrees compared to the SX car, though they share a 1.0-inch ride height increase, Snow mode, and lockable center differential. We're curious how our long-termer will handle

dirt, potentially with a tent mounted on its \$360 optional rooftop crossbars—we at least predict Sorentoro Elios will look great after a trail dusting.

Other options include carpeted floor- and cargo mats for \$325, a \$190 retractable cargo cover, and a \$350 auto-dimming rearview mirror. Those extras put our Sorento SX at \$42,190, comparable to generously equipped Telluride models. But with the Sorento's new styling, Kia's intent to free the Sorento from the in-betweener doldrums seems legit-make it a vehicle to choose on its own merits rather than just because it splits differences.

Will that intent alone be enough to get the Sorento back on the minds of three-row SUV intenders? We'll keep you updated over the next year.





2020 Mercedes-Benz GLE 450

Service Life: 9 mo/15,737 mi Average Fuel Econ: 19.3 mpg



"We all make mistakes. I made one with one of my first GLE critiques." Jonny Lieberman

Unresolved Problems None Maintenance Cost \$377.01 (inspection, oil change) Normal Wear \$0 Base Price \$62,745 As Tested \$89,385 EPA City/Hwy/Comb Fuel Econ 19/24/21 mpg

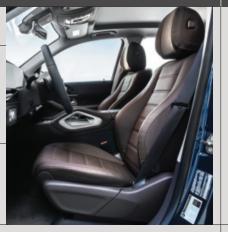
ea culpa. This might come as a shock to some of you, though not my wife: I'm not perfect. Try as I might, I make mistakes. Even professionally. Case in point, back in November 2018, I drove the then-brand-new Mercedes-Benz GLE for the first time. Overall, I loved it (I even used the word "love" in the story), but there was a part of the vehicle I didn't love, or even like. "My big GLE gripe involves Mercedes-Benz's new MBUX telematics system, which is too complicated by half."

To be fair, I was driving all around Texas for two days, yacking with another journalist, and every time either of us said the word "Mercedes," the system would interrupt with, "How may I help you?" Quite annoying. Also, turns out that screaming, "SHUT UP!" (or worse) at MBUX doesn't cancel it. Anyhow, I wrote, "There is a way to make the oodles of technology easily accessible, but MBUX ain't it." I've regretted writing that sentence since the first week I spent with our long-term GLE 450.

I feel with most cars you learn everything they do and are capable of in the first week or so, and then as the months roll by, the little things start to annoy you. For instance, my wife and I purchased an Alfa Romeo Giulia, and the lack of a surroundview camera is slowly driving her nuts. (Hey, man, grocery store parking lots are war zones out here in L.A., with the Trader Joe's in Silverlake being Dante's fifth circle of hell.) MBUX not only has a surround-view parking camera, but there are eight total cameras with five selectable views.

That's the tip of the MBUX iceberg. Take the Seat Comfort tab, under Comfort.





There's a submenu there for Seat Kinetics. What's that? It's a setting that every 60 seconds or so—ever so slightly—moves your seat. We're talking tiny adjustments. A degree on the seat back here, a millimeter further back there. Why? You know how after a long drive you get out of the car and you're stiff and miserable because you haven't moved in four hours? The solution is Seat Kinetics. The GLE has been animating your carcass for the past 400 miles. Literally brilliant.

I'm trying to think of another vehicle where I keep discovering additional bits of built-in technology after putting 20,000 miles on it. Drawing a blank. Like Themes. I'm not even sure all that Themes does, but essentially, the car comes preloaded with five themes, and you can create your own. An MBUX theme allows you to customize the screens, the ambient lighting, the perfume (should you have it), and the vehicle's dynamic characteristics, plus more. Let's pretend that I have a vacation home in Big Sur (lolz). I create a Big Sur Theme that enters my second house's address into the nav (including my preference to stay off freeways-Pacific Coast Highway all the way) and tunes to my favorite road trip radio station. Then I can preprogram the driving mode I want-Sport, obviouslyand choose what screen I want to initially appear. Like the map, for example. Finally, you get to choose an image (how about a yacht at sea?) and name the theme. Morning commute theme? No problem. Pretty wild, pretty amazing, and I didn't realize these themes even existed until about 10 months in.

To sum up, the Mercedes–Benz User Experience, a.k.a. MBUX, is perhaps the most sophisticated such system on the market. If it isn't the peak, MBUX is right near the top. There's a depth and richness to the functionality that carries a bit of a learning curve but is totally worth it when you learn all its secrets. I'd like to apologize to the Daimler Corporation once again for being so flip at first blush. I'll try (but probably fail) to do better next time.

2020 Toyota GR Supra

Service Life: 12 mo/8,683 mi Average Fuel Econ: 24.8 mpg



"We finally went in for the Supra's first service, and we made a few discoveries." Chris Walton

Unresolved Problems None Maintenance Cost \$0 (oil change, inspection, tire rotation) Normal Wear \$0 Base Price \$54,945 As Tested \$56,565 EPA City/Hwy/Comb Fuel Econ 24/31/26 mpg

ecause we're not driving nearly as much as we did in the before times, mostly working remotely, the miles aren't exactly piling on our Supra.

As a result, when its odometer ticked past 8,000 miles, almost precisely a year after its arrival, it alerted me it was due for its first service/oil change. And while this year has been plodding along, I made a few discoveries about the car.

I certainly love how easy it is now to find a nearby dealer/service center online, pick a date and time, and add any pertinent information prior to arriving. I planned the timing and the location of the visit so I could walk to a nearby restaurant for lunch—Thai takeout, for those interested. And if you've been following along with the Supra's updates, you'll know that everyone who has driven the Supra has complained that the central display and gauges are too dim. To get to the bottom of it, I added that to the online reservation for service.

The first discovery occurred when I was informed the thumb wheel with a light and gauge icon on the lower left side of the dashboard does not control the brightness of gauges or screen. That wheel is for the interior's ambient lighting. What? It's labeled with a light and a gauge icon. To adjust the brightness of the display or gauges, you must walk seven steps deep into the menus. 1) My Vehicle, 2) System Settings, 3) Displays, 4) Control Display, 5) Brightness at Night, 6) turn the controller until the desired brightness is set, and finally 7) press the controller. Easy, right?

Ironically, the owner's manual follows up with a warning: "Depending on the light conditions, the brightness settings may not be clearly visible." HA! No kidding. It's too dim, and according to what I saw on the screen, it was already set to its brightest position. When I tested the more powerful 2021 Supra to compare it to this one, I noted its screen and gauges were similarly dim. It's just the way they all are. Sorry, folks.

Discovery No. 2: Normally, a Toyota is covered free of charge for routine maintenance for two years or 25,000 miles,



whichever comes first. However, because Toyota owns this car and isn't a customer, our Supra didn't qualify. After a thorough inspection, topped off washer fluid (free), tire rotation, and oil change, the total cost for routine maintenance was \$165.88. (The chart at left displays what you'd pay with Toyota's complementary maintenance.) This included 7 liters of 0W20 synthetic oil, an oil filter, and a drain plug gasket. For perspective, the cost of an oil change and inspection for the Honda Civic Type R I chaperoned for a year was less than \$100.

Moving on, one idiosyncratic feature of BMWs has been to allow front occupants to vary the temperature of air directed from the dash vents from that in the footwell. In the past, there have been prominent blue-to-red dials on the dash to raise and lower upper-body venting temps. These have since been relegated to a menu deep in the settings. I prefer warm feet and a cool torso. I wondered, "Does the BMW-based Supra have this feature?" It does. A mere five steps deep: 1) My Vehicle, 2) Vehicle Settings, 3) Climate Functions, 4) Temperature

Comfort ventilation

Adjustment, Upper Body, then 5) set the desired temperature. Done.

Lastly, I love that so many cars now have wireless charging trays. But the Supra's is covered by a plastic shroud, with only a narrow slot on the leading edge, which has always frustrated me. Reaching over the shifter and under the shroud (or the reverse) to place or retrieve my phone quickly became tiresome. I tugged on the shroud to see if it was removable but always felt like I'd break something if I forced it. Well, one day I was determined. Like Tab A in Slot B, I managed to pop it out without ill effects. Gah! The rubberized surface already



ensures my phone stays in place while driving, so what's the story on the shroud, Toyota? Byeee. Since the last update, we've only managed to add 1,557 miles. However, most

of those miles were driven on highways, not commuting. As a result, the running average fuel economy rose from 24.5 mpg to 24.8 mpg, inching closer to the EPA's 26 mpg combined rating.

One more guest-authored update from a 1,000-mile road trip is on its way. Stay tuned.

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The Civic Si's 1.5-liter turbocharged I-4 puts out "only" 205 horsepower, but in this car, that's plenty to make it the best sport sedan at this price point. —





"After a too-short time with the Civic Si, I can say minor concessions in comfort return huge gains in driver engagement." Scott Evans Options None Problem Areas None Maintenance Cost \$0 Normal Wear Cost \$0 Recalls None

Base Price \$26,130 As Tested \$26,130

Service Life 5 mo/3,004 mi EPA City/Hwy/Comb Fuel Econ 21/28/24 mpg

Buying performance often costs more than money; it costs comfort and convenience. If you're buying a Honda Civic Si, though, it doesn't have to.

Right off the bat, the Civic Si isn't expensive. It's also convenient to purchase; because of the way Honda structures its options as separate trim levels, the Civic Si is basically a monospec vehicle. You can only get it as a sedan with a manual transmission and a decent set of features. It rings in at just \$26,130, making it one of the cheapest sporty cars on the market in the best way possible. For that price, you get 31 more horsepower than a standard Civic, two-mode electronically controlled dampers, and a

limited-slip differential. We ordered the High Performance Tire option, but aside from that, all you could add to this car are some dress-up parts, a wireless phone charger, and an auto-dimming rearview mirror. The last two would've been nice, but you can easily live without them.

It doesn't cost you much in comfort, either. The standard setting for the adjustable shocks is firmer than what you'll find in your average compact sedan, but not much. The shocks get firmer still in Sport mode, but that's just for when you're pushing the car on a good road. The front seats have side bolsters to keep you in place, but they're big, soft pads, not rigid extensions. If the Si is any louder

inside than a standard Civic, it's not enough to notice. (Interior noise has long been a Civic weak spot.)

The Si also costs almost nothing in terms of livability—or actually nothing if you don't consider driving a stick shift in traffic to be inconvenient. It has the same rear seat space and access, plus roomy trunk, as the regular Civic sedan. And although there's no navigation option, it does come with Apple CarPlay and Android Auto so you can use your phone instead.

A real-world example of its practicality: My wife and I didn't have a second thought when we rented a house with a pool three hours away for a socially distanced anniversary this year. I thought for sure we'd stuff the car to the roof with clothes, food, drinks, and entertainment for a week, but we barely filled the trunk. Hours on the freeway were no big deal as the car was neither too stiff nor too loud for a road trip, nor were the seats too uncomfortable.

On that particular trip, it was just a nice little compact sedan with some extra zip useful for passing lane hogs. On other trips, especially those up into the mountains to go hiking, it was the best sport sedan for the money. (The Type R is a hatchback.) The chassis composure could teach things to more than a few sports cars that cost three times as much.

The Civic Si is what we call a





The seats offer a wonderful compromise between support for sporty driving and comfort for everyday use.



momentum car. At 205 horsepower, it's no monster, but at 2,900 pounds, you don't really have to slow down, either. There's a delightful dance to be had in braking just enough to safely make the corner without losing any more momentum than absolutely necessary. The brakes, which aren't even upgraded past a set of performance pads, stand up to anything you can throw at them, which isn't much because again, you don't really have to slow down much for most corners. On the way out, the limited-slip lets you pull the car out of the corner by getting back on the power early, making the most of every pony. The manual transmission, the best this side of a Porsche, never lets you miss a shift, and the pedals are spaced perfectly for heel-toe downshifting.

Its shortcomings are few. If you're something of a drag racer, this isn't the car for you. It feels quicker than it is, and the engine lags below 3,000 rpm and runs out of steam 1,000 rpm before redline. It's best when hustled on a road where you can keep both the car's speed and the engine's speed up. Around town, you're best off shifting before the turbo switches on—and when you're hustling, short-shifting.

About here we'd normally talk about maintenance costs over the past year. But this was unfortunately not a normal long-term test, having only had the car for five months and not driving enough to reach even the first scheduled maintenance. We have had two other 10th-gen Civics in our fleet, however. A 2016 Touring cost \$483.20 over four services, and a 2018 Type R cost \$147 over two.

It's easy to overlook the Si when the Type R is there on the lot—though it's \$11,500 more—but whether you're on a budget or unwilling to make the compromises the R demands, the Si delivers. It's rewarding to drive on the best roads and comfortable on the commute. It compromises little in exchange for the fun it provides, leaving you with a practical sedan every day of the week.

2020 Honda Civic	Si
DRIVETRAIN LAYOUT	Front-engine, FWD
ENGINE TYPE	Turbocharged I-4,
VALVETRAIN	alum block/head DOHC, 4 valves/cyl
DISPLACEMENT	91.4 cu in/1,498cc
COMPRESSION RATIO	10.3:1
POWER (SAE NET)	205 hp @ 5,700 rpm
TORQUE (SAE NET)	192 lb-ft @ 2,100 rpm
REDLINE	6,500 rpm
WEIGHT TO POWER TRANSMISSION	14.1 lb/hp 6-speed manual
AXLE/FINAL DRIVE RATIO	4.35:1/2.98:1
SUSPENSION, FRONT;	Struts, coil springs, adj
REAR	shocks, anti-roll bar;
	multilink, coil springs, adj shocks, anti-roll bar
STEERING RATIO	10.9:1
TURNS LOCK TO LOCK	2.1
BRAKES, F; R	12.3-in vented disc;
WHEELS	11.1-in disc, ABS 7.0 x 18-in cast
MHEET2	aluminum
TIRES	235/40R18 95Y
	Goodyear Eagle F1
DIMENSIONS	Assymetric 2
WHEELBASE	106.3 in
TRACK, F/R	60.5/61.2 in
LXWXH	182.8 x 70.8 x 55.5 in
TURNING CIRCLE	37.8 ft
CURB WEIGHT	2,899 lb
WEIGHT DIST, F/R SEATING CAPACITY	61/39%
HEADROOM, F/R	37.5/36.8 in
LEGROOM, F/R	42.3/37.4 in
SHOULDER ROOM, F/R	56.9/55.0 in
CARGO VOLUME	14.7 cu ft
TEST DATA	
ACCELERATION TO MPH 0-30	2.5 sec
0-40	3.6
0-50	4.9
0-60	6.8
0-70	8.7
0-80 0-90	11.1
0-100	17.2
PASSING, 45-65 MPH	3.6
QUARTER MILE	15.1 sec @ 93.9 mph
BRAKING, 60-0 MPH	106 ft
MT FIGURE EIGHT	0.95 g (avg) 25.7 sec @ 0.69 g (avg)
TOP-GEAR REVS @ 60 MPH	2,400 rpm
CONSUMER INFO	,
BASE PRICE	\$26,130
PRICE AS TESTED	\$26,130
STABILITY/TRACTION	Yes/Yes
AIRBAGS	6. Dual front front side
Синалін	6: Dual front, front side, f/r curtain
BASIC WARRANTY	3 years/36,000 miles
POWERTRAIN WARRANTY	5 years/60,000 miles
ROADSIDE ASSISTANCE	3 years/36,000 miles
FUEL CAPACITY	12.4 gal
RECOMMENDED FUEL	26/36/30 mpg Unleaded premium
VECOMIMENDED FOEL	onleaded premium



Angus MacKenzie The Big Picture









yundai's i20 N is a riot, a punchy little zinger of a car that will have you grinning from ear to ear as you pinball it down a winding road. It's also forbidden fruit: America's enduring aversion to small hot hatches means we won't see the i20 N stateside. And that is a shame, because the i20 N is Hyundai's best driver's car. For now.

Driving the i20 N brought back memories of my first drive of the Hyundai Genesis Coupe. It happened back in 2007 in an off-the-record session with the then-secret two-door at Hyundai's Namyang R&D Center in Korea. The handling track itself wasn't great, but the car impressed. As a first stab at an affordable, sporty, rear-drive coupe, it was a solid effort.

I referenced BMW's 3 Series a lot in my post-drive debrief with the Hyundai engineers. BMW has fallen from grace in recent years, but back then the 3 was a benchmark for powertrain response, chassis balance, and steering feel, and I wanted Hyundai to aim high.

One key area of discussion was the control weighting, how the shifter, clutch, and brake pedal felt to use. I made the point that, for a sporty car, the Genesis Coupe's controls all felt too light, robbing them of the precision and feedback those in a BMW gave. But, the engineers said, Asian drivers like light control weights. "Tell me," I replied, "does BMW sell many cars in Asia?"

The engineers exchanged thoughtful glances.

Fast-forward to 2021. The i20 N's control weights are terrific. From steering to shifter to clutch to brake, it feels like a meaty, concise little car to drive. You'll switch off the rev-matching system because the beautifully placed pedals make heel-and-toe downshifts utterly intuitive.

You can thank BMW. Literally.

Hyundai made headlines in 2015 when it announced former BMW M chief Albert Biermann would head development for a range of performance-focused Hyundai models. Biermann established Hyundai's N brand—how else do you follow on from having run M?—and proceeded to roll out a string of go-fast models, starting with the i30 N

in 2017. Biermann's N cars impressed critics and rivals alike, and the ever-alert and opportunistic Koreans paid attention: The 30-year BMW veteran is now head of R&D for the entire Hyundai-Kia group.

It's Biermann you can feel in the third-generation i20 N, the first N car whose base model began development after the German joined the company.

N is not just a marketing halo, confirms Alexander Eichler, a former Bosch engineer now working out of Hyundai-Kia's tech center in Rüsselsheim, Germany, to help hone the dynamics of all the company's cars and SUVs. "In the N cars, we often detect things that could be improved because we're taking the cars to a higher limit," he says. "If there is something to improve, it pops up in the N vehicles first, and one of the goals is to develop and transfer this to the mainstream cars."

From steering to shifter ethic that means this transfer happens almost in real time. "Co-working with the

Korean engineers is fantastic," Eichler

says. "Once you convince them of a feature,

everything is tremendously fast in development."

Eichler won't be drawn on specifics but hints the N portfolio will expand and that future Hyundai hybrid and EV models will receive the N treatment, as well: "We're looking at everything."

But not anything. The Mercedes model, where there's now an AMG version of almost every mainstream vehicle, is not N's future. "An N car is still more radical than the step from a normal Mercedes to an AMG," Eichler says.

"It will be bought by quite a specific type of customer, and I don't think the customer group will become extremely large. I think the N's are more special."

Hyundai-Kia is already building cars and SUVs that are better designed and more accomplished than many of those from its Japanese rivals. Now the Europeans had better start looking over their shoulders, too. ■

Hyundai's i20 N isn't slated for the U.S. market, but it takes the already impressive N performance treatment to new heights. And that's a very good thing.



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Vehicle performance means nothing without confidence. Whether it's at the track, on the road, or even off-road, a vehicle's main purpose is to inspire that sense of confidence in the driver. This is no easy feat, and the pursuit of it has led to an inseparable relationship between Honda automobiles and Honda Performance Development.™ While the vehicles Honda races may seem to have little in common with those driven on the road, the knowledge and philosophy learned on the track carry over to the streets—and vice versa. Take, for example, the Honda Racing Baja Ridgeline, a 550-horsepower twin-turbocharged truck that races across hundreds of miles of desert. The heart of this raucous racer is built upon the same engine block and heads as the road-going Ridgeline. Some might say this is wasteful over-engineering; we say it's over-engineering at its finest. After all, we designed the Ridgeline with a goal in mind: to never get stuck. So it has to be capable of far more than a trip to the hardware store.



This philosophy of rugged practicality carries over to every part of the Ridgeline, particularly the intelligent Variable Torque Management™ (i-VTM4*) all-wheel-drive system, which helps to improve stability and control through torque vectoring. At any moment, a system of clutches will engage to send as much as seventy percent of the engine's power to the rear axle, then up to one hundred percent of that power to the left or right wheel. This gives you four independent points of traction, each receiving the appropriate amount of torque needed to help pull you through difficult terrain. Quite simply, the Ridgeline is designed to give you the confidence to actually exploit its rugged capabilities. Ironically enough, the iVTM-4 vastly improves on-road performance as well by sending power to the outside wheels during hard cornering, much like the sports-car breed. Coupled with a first-in-class independent rear suspension and a lightweight unibody structure, one might say the Ridgeline is more agile than a truck needs to be. But it's just the type of "over-engineering" we put into every Honda, from the ones driven on the road to the ones raced in the desert.

